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Durum Wheat Quality Report

Physical, Chemical, Milling, and Spaghetti Characteristics



1995 Crop

United States Department of Agriculture
Agriculture Research Service
RRVARC, Fargo, North Dakota

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Physical, Chemical, Milling, and Spaghetti Characteristics



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Hard Red Spring and Durum Wheat Quality Lab
United States Department of Agriculture
Agriculture Research Service
Harris Hall, NDSU
RRVARC, Fargo, North Dakota
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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
in cooperation with the
ND STATE AGRICULTURAL EXPERIMENT STATIONS

QUALITY EVALUATION OF DURUM WHEAT CULTIVARS

1995 CROP^{1/}

by

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1/ This report represents cooperative investigations on the quality of Durum wheat cultivars from the 1995 crop. Some of the results presented have not been sufficiently confirmed to justify variety release. Confirmed results will be published through established channels. Cooperators submitting samples for analysis have been given analytical data on their samples prior to release of this report. The report is primarily a tool for use by cooperators and their official staff and by those individuals having direct and special interest in the development of agricultural research programs.

This report was compiled by the Agricultural Research Service, U. S. Department of Agriculture. Special acknowledgment is made to the North Dakota State University for use of their facilities and the services provided in support of these studies. The report is not intended for publication and should not be referenced in either literature citations or quoted in publicity and advertising. Use of the data may be granted for certain purposes upon written request to the agency or agencies involved.

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INTRODUCTION

The thirty-second Durum Wheat Quality Report contains data for the 1995 crop. Samples of standard cultivars and new selections of durum wheat grown in cooperative experiments in the durum wheat regions of the United States were milled and evaluated by the Hard Red Spring and Durum Wheat Quality Laboratory on the campus of North Dakota State University, Fargo, ND. Methods and techniques are described in detail in the text of the report.

Durum wheat samples of at least 2 kg were milled in a Buhler experimental mill, or macro procedure, and further processed into spaghetti. Smaller wheat samples were milled using the micro procedure and were not processed into spaghetti. Although, small samples having acceptable kernel characteristics and dust color scores, if possible, should be included in the macro procedure the following year.

The purpose of this report is to provide quality data on standard cultivars and new selections of durum wheat from the 1995 crop.

SOURCE OF THE 1995 CROP SAMPLES

Tests were performed on 761 samples from 15 stations in six states (California, Arizona, North Dakota, Montana, Minnesota, and Oregon) and one Canadian location. Data presented in this report are from the Field Plot Nursery, Uniform Regional Nursery, Advanced Nursery and Special Nursery.

UNIFORM REGIONAL NURSERY - 544

Bozeman and Sidney - Montana
Carrington, Minot, Williston, Dickinson, and Prosper - North Dakota
Swift Current - Saskatchewan
Morris and Crookston - Minnesota

FIELD PLOTS - 21

Minot, Langdon and Dickinson - North Dakota

ADVANCED NURSERY - 151

Imperial Valley and Davis - California

SPECIAL NURSERY - 45

Tucson - Arizona
Pendleton - Oregon

1995 UNIFORM REGIONAL DURUM NURSERY

LIST OF ENTRIES

| Entry No. | Entry | Pedigree | P.I. No. | Origin |
|-----------|----------|--------------------|----------|---------|
| 1 | MINDUM | | 5296 | MN |
| 2 | MUNICH | | | ND-USDA |
| 3 | WARD | | 15892 | ND-USDA |
| 4 | RUGBY | | 17284 | ND-USDA |
| 5 | VIC | | 17789 | ND-USDA |
| 6 | LLOYD | | 476211 | ND-USDA |
| 7 | MONROE | | 478289 | ND-USDA |
| 8 | RENVILLE | | 510696 | ND-USDA |
| 9 | MEDORA | | | CANADA |
| 10 | SCEPTRE | | | CANADA |
| 11 | D87130 | D8024/MONROE | | ND-USDA |
| 12 | D87240 | D7798/DT367 | | ND-USDA |
| 13 | D88303 | D82106/D8179 | | ND-USDA |
| 14 | D89135 | D8193/D8335 | | ND-USDA |
| 15 | D901313 | D8479/RENVILLE | | ND-USDA |
| 16 | D901419 | LAKER/D79209/D8012 | | ND-USDA |
| 17 | D901442 | D8460/D8469 | | ND-USDA |
| 18 | D901486 | D8459/D8302 | | ND-USDA |
| 19 | D901518 | D8428/SCEPTRE | | ND-USDA |
| 20 | D901536 | D81154/D8487 | | ND-USDA |
| 21 | D901786 | D8370/D86518 | | ND-USDA |
| 22 | D901155 | D86237/MEDORA | | ND-USDA |
| 23 | D91058 | D84102/D8459 | | ND-USDA |
| 24 | D91066 | D84102/D8459 | | ND-USDA |
| 25 | D91103 | VIC/D8518 | | ND-USDA |
| 26 | D91180 | D8304/D8460 | | ND-USDA |
| 27 | D91309 | D84107/SCEPTRE | | ND-USDA |
| 28 | D91321 | D8457/DT457 | | ND-USDA |
| 29 | D91306 | D8403/MONROE | | ND-USDA |
| 30 | D91076 | D8291/MEDORA | | ND-USDA |
| 31 | D91080 | DT606/D8291 | | ND-USDA |
| 32 | D91410 | D86524/D8380 | | ND-USDA |

METHODS

The following methods and terminology were applied:

Test Weight Per Bushel - The weight per Winchester bushel of dockage-free wheat subsequent to passing the sample through a Carter-Day dockage tester^{4/}.

Thousand Kernel Weight - The 1000 kernel weight was determined from a 10 gm sample of cleaned, hand-picked wheat using a Seedburo Seed Counter^{4/}.

Kernel Size - The percentage of the size of the kernels [large, medium, and small] was determined on a wheat sizer as described by Shuey^{5/}.

The sieves of the sizer were clothed as follows:

Top Sieve - Tyler # 7 with 2.92 mm opening

Middle Sieve - Tyler # 9 with 2.24 mm opening

Bottom Sieve - Tyler #12 with 1.65 mm opening

Protein Content - Both the Leco FP-428 Nitrogen Determinator and the near infrared technique were used to determine protein content. Nitrogen values, as determined by the Leco FP-428 Nitrogen Determinator procedure, were multiplied by 5.7 to calculate protein values.

Hardness Test - The procedure (AACC Method 39-70A) requires grinding durum wheat samples in a UDY grinder, and obtaining data from a Technicon 450 near infrared analyzer. Wavelengths used were 1680 nm and 2230 nm. This procedure was developed by Mr. Karl Norris, USDA, Beltsville through a collaborative research project in which this Laboratory also participated.

^{4/} Mention of a trademark name or proprietary product does not constitute a guarantee or warranty of the product by the U. S. Department of Agriculture, and does not imply its approval to the exclusion of other products that may also be suitable.

^{5/} Shuey, William C. A wheat sizing technique for predicting flour milling yield. Cereal Sci. Today 5:71 (1960).

Milling - All samples were cleaned by passing the wheat through a Carter-Day dockage tester. The clean, dry wheat from the larger 2 kg samples was tempered in three stages: first to 12.5% moisture at least 72 hours prior to the second stage; second, an increase of 2.0% moisture to a cumulative moisture of 14.5% for 18 hours; and third, an increase of 3.0% moisture to a cumulative moisture content of 17.5%, 45 minutes prior to milling. The smaller 100 gram samples were pretempered to 12.5% moisture for at least 72 hours. Following, they were tempered to 16.5% moisture and allowed to stand overnight prior to milling.

Samples from the Special and Uniform Nursery were milled in a Brabender Quadrumat Junior mill equipped with #24GG on the drum sieve. The flow diagram of this system is shown on page 9. The unpurified semolina was rebolted for 30 sec on a strand sifter equipped with a U.S. #35 Tyler sieve. The throughs of the #35 Tyler sieve were classified as rebolted semolina. The overs of the #35 Tyler sieve were reground and sieved again for 30 seconds. The throughs were combined with the first sieving, and the combined semolina represented the material tested. The overs of the #35 Tyler sieve were classified as crude shorts, and overs of the rotating #24GG sieve were classified as bran.

Samples from the Field Plot, Special, and Advanced Nurseries were milled in a Buhler experimental mill specially designed for milling durum wheat. The mill is equipped with corrugated rolls throughout, and the semolina is purified on a Miag laboratory purifier. All stock is handled pneumatically. The mill flow is shown on page 10. Prior to milling, the Buhler mill and purifiers were adjusted to maximize semolina yield, yet keep the speck count to an acceptable level.

Semolina Extraction - For both the micro and macro method of milling, the percent semolina extraction was calculated on a total product basis.

Speck Count - The number of specks was determined from three separate one-inch square areas of semolina enclosed by a special glass and frame. Any materials other than pure endosperm chunks, such as bran particles, were considered specks. The average of three readings was converted to the number of specks per 10 sq in (speck count). Speck count is determined only on the macro milled samples.

Mixograph Analysis - Mixing properties were determined from a constant weight of semolina (10 g) and water (6.0 ml).

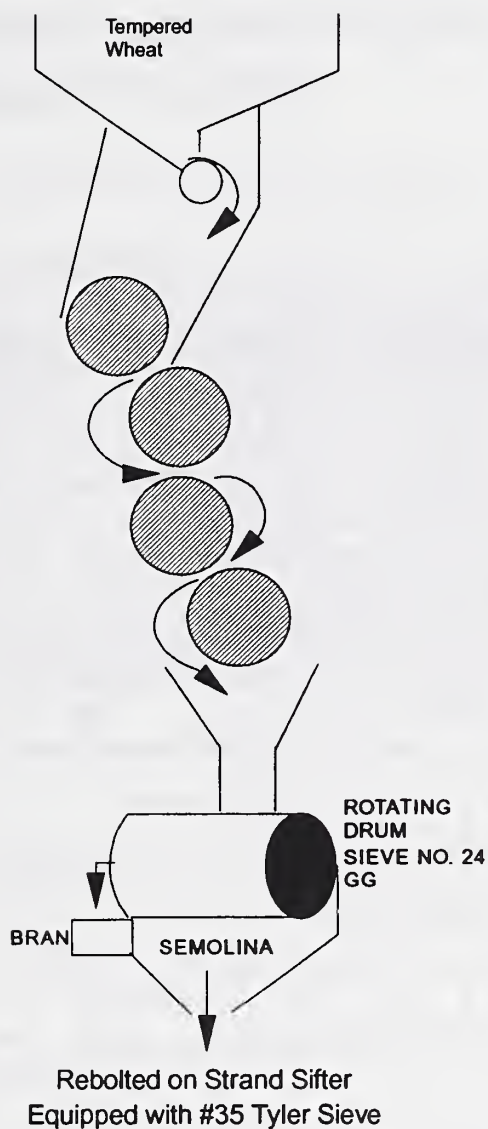
Mixogram Pattern - The reference mixograms shown on page 14 illustrate different types of mixogram patterns. A single number is assigned each pattern to classify the curves. Larger numbers indicate stronger mixing characteristics.

Color Score - The color of the spaghetti or semolina has generally been accepted as the most important single grading factor. A deep amber or golden color is most preferable. The amount of yellow pigmentation determines the color.

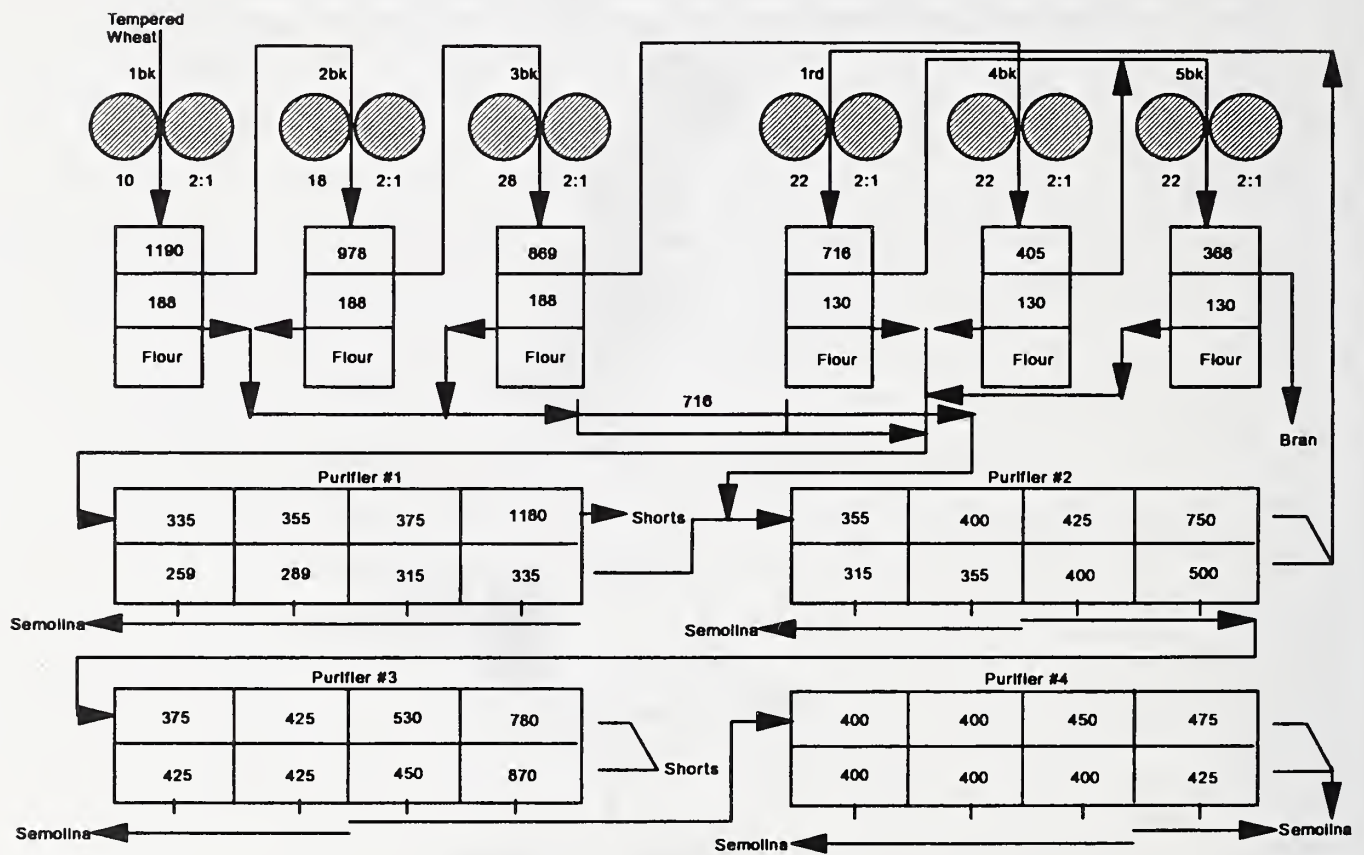
Cooked Weight - Weight of cooked spaghetti determined after cooking, rinsing, and draining.

Semolina and Spaghetti Color - A Minolta CR-310 series ChromaMeter was used to calculate an absolute value of a standard semolina and spaghetti sample in the L* a* b* color system. In this system, L* refers to lightness and a* and b* are the chromaticity coordinates (b* values relate to the blue - yellow chromaticity coordinates). A target b* value was obtained from standard color tiles. Color scores were derived from L and b values where $\text{score} = L + (b^2) / 20$. Because of the importance of yellow pigmentation, the intensity of b was weighted twice. Color rating scores from 1-10 indicate the higher the score, the more favorable the color.

Flow Diagram for Small Durum Wheat Samples (Micro Procedure)



Flow Diagram for Large Durum Wheat Samples (Macro Procedure)



MACRO Spaghetti Processing - Spaghetti was processed in a semi-commercial scale pasta extruder (DEMACO). The controls and samples were processed under the following extruding conditions.

Temperature 49.5°C

Rate. 12 rpm

Absorption. 32.5%

Vacuum. 18 in Hg

These were the optimum conditions for processing spaghetti.

Processing spaghetti in the laboratory involved premixing 1000-g batches of semolina in a Hobart C-100-T mixer equipped with a pastry knife agitator. The contents were mixed at a slow speed for approximately 10 seconds while water was added to the semolina. Upon addition of all the water to obtain 32.5% absorption, the contents were blended at high speed for 30 seconds. The mixer was then stopped to scrape down the sides of the bowl, and blending continued for an additional 90 seconds to complete the premix stage. The premixed pasta was then transferred to the vacuum mixer of the press and extruded through an 84-strand 0.043 in. Teflon spaghetti die. A jacketed extension tube (9-1/4" long x 1-3/4" inside diameter) was attached to the semi-commercial pasta extruder to allow a longer time for hydration of the semolina and minimize the number of white specks (unhydrated semolina) in the spaghetti. Extrusion temperature was controlled by a circulating water bath.

Spaghetti Drying - Spaghetti was dried in an experimental pasta dryer for an 18 hour, computer controlled cycle. The drying cycle was a modification of that described by Gilles, Sibbitt and Shuey^{6/}. During the drying period, the humidity of the dryer was decreased linearly from 95 to 50% R.H. The temperature was held at 40°C for the first 10 hour and was then decreased linearly from 40°C to 30°C during the last 8 hours of the cycle.

Cooking Characteristics of Spaghetti

A. Cooking Procedure

Spaghetti (10 g) which had been broken into lengths of approximately 5 cm, was placed into 300 ml of boiling water in a 500 ml beaker. After 12 min. cooking, the samples were washed thoroughly with distilled water in a Buchner funnel, allowed to drain for 2 min., and then weighed to determine cooked weight.

B. Firmness Score

Strands of cooked spaghetti were placed on a plexiglass plate and sheared at a 90° angle with a special plexiglass tooth. An TA-XT2 texture analyzer was used to calculate the area under the curve (g-cm) which was the amount of work required to shear the cooked spaghetti. To measure firmness, the average of three texture analyzer scores was used, and the average work to shear represented a measure of spaghetti firmness.

The higher the value, the firmer the spaghetti. A value of approximately 6.00 is preferred.

C. Residue

Weight of the solids remaining after the combined cooking and washing water was evaporated.

^{6/}Gilles, K.A., Sibbitt, L.D., and Shuey, W.C. Automatic laboratory dryer for macaroni products. Cereal Sci. Today 11:322 (1966).

EXPERIMENTAL RESULTS - 1995 CROP

The results are tabulated and presented in the following order: Uniform Regional Nursery, Tables 1-11; Field Plot Nursery, Tables 12-14; Advanced Nursery, Tables 15-22 and Special Nursery, Table 23 and 24.

UNIFORM REGIONAL NURSERY

A total of five hundred forty-four samples were submitted for testing. Thirty-two cultivars and experimental lines were received from in three states and one Canadian province. These included ten commercial durum cultivars, and twenty - two experimental durum lines. Langdon was discarded this year due to poor quality. Quality data on individual samples from each of the ten stations is shown in Tables 1-10. The averages of the quality factors from all locations are shown in Table 11.

FIELD PLOT NURSERY

A total of twenty-one samples were received from three stations, all of which were commercial cultivars. Samples were milled, and the semolina was processed into spaghetti using the macro method. Langdon station was not milled due to poor quality.

Minot, Langdon, and Dickinson, North Dakota - Table 12-14

ADVANCED NURSERY

A total of one hundred fifty-one samples were received from two stations in California. All samples were milled in a Buhler experimental mill, and the semolina was processed into spaghetti.

Imperial Valley, California - Table 15-17

Davis, California - Table 18-22

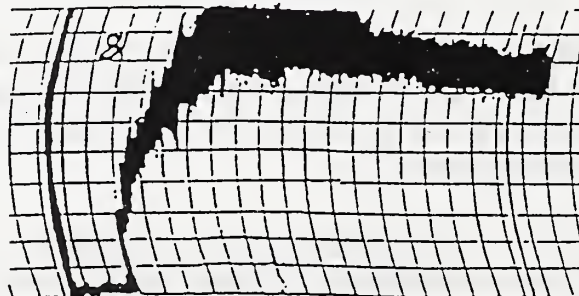
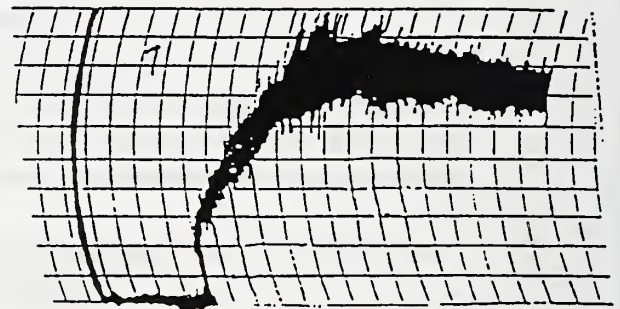
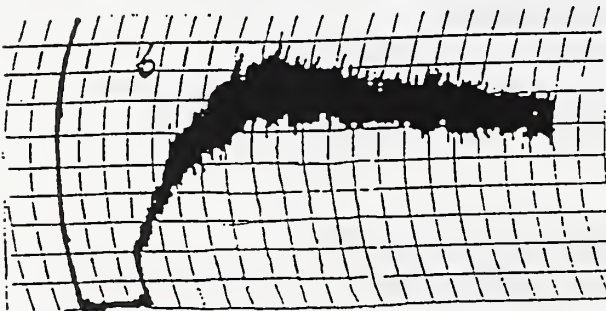
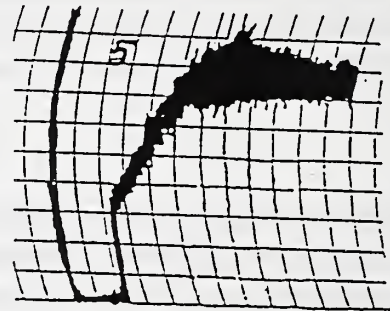
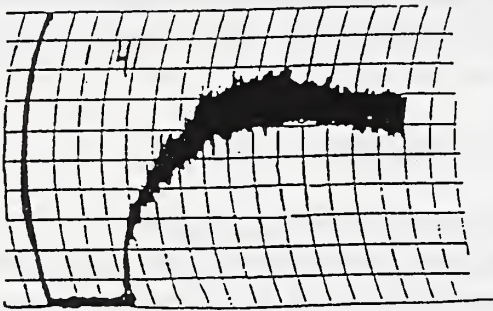
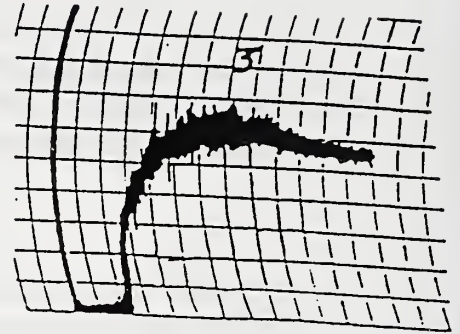
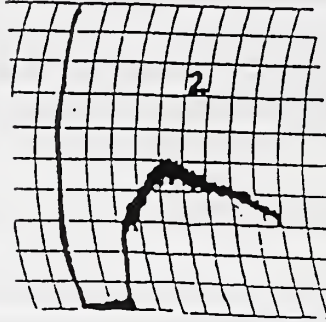
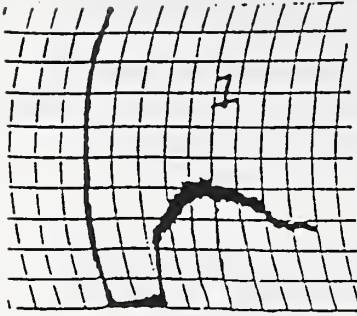
SPECIAL NURSERY

A total of forty-five samples were received from Tucson, Arizona and Pendleton, Oregon. Samples from Tucson were milled in a Buhler experimental mill, and the semolina was processed into spaghetti. Samples from Pendleton were milled in the Quad Jr. experimental mill.

Pendleton, Oregon - Table 23

Tucson, Arizona - Table 24

STANDARD MIXOGRAMS PATTERNS



RESULTS

Tables 1-24

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Wheat Quality Lab

Table 1

Sidney, Mont.

Average of both Reps.

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|-----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 Mindum | 65.2 | 43.5 | 56 | 1 | 12.2 | 111 | 61.1 | 6.8 | 1 | 336 |
| 2 Mindum | 64.7 | 44.8 | 65 | 1 | 12.9 | 116 | 58.7 | 6.7 | 1 | 397 |
| Mindum | 65.0 | 44.2 | 61 | 1 | 12.6 | 113 | 59.9 | 6.7 | 1.0 | 367 |
| 1 Munich | 62.6 | 44.6 | 55 | 1 | 12.4 | 108 | 61.1 | 7.2 | 2 | 353 |
| 2 Munich | 63.0 | 46.1 | 61 | 1 | 13.3 | 119 | 58.7 | 7.1 | 2 | 375 |
| Munich | 62.8 | 45.4 | 58 | 1 | 12.8 | 114 | 59.9 | 7.1 | 2.0 | 364 |
| 1 Ward | 62.6 | 40.8 | 44 | 2 | 12.9 | 116 | 58.2 | 7.0 | 1 | 330 |
| 2 Ward | 63.2 | 44.6 | 59 | 1 | 14.0 | 124 | 55.5 | 7.0 | 1 | 400 |
| Ward | 62.9 | 42.7 | 52 | 2 | 13.5 | 120 | 56.8 | 7.0 | 1.0 | 365 |
| 1 Rugby | 63.0 | 40.7 | 48 | 2 | 12.5 | 110 | 60.6 | 7.1 | 1 | 320 |
| 2 Rugby | 62.8 | 40.5 | 40 | 2 | 13.5 | 122 | 57.3 | 7.1 | 1 | 377 |
| Rugby | 62.9 | 40.6 | 44 | 2 | 13.0 | 116 | 58.9 | 7.1 | 1.0 | 349 |
| 1 Vic | 63.4 | 45.5 | 64 | 1 | 13.1 | 116 | 58.7 | 7.1 | 2 | 353 |
| 2 Vic | 63.0 | 47.6 | 64 | 1 | 14.4 | 120 | 55.0 | 7.2 | 2 | 400 |
| Vic | 63.2 | 46.6 | 64 | 1 | 13.7 | 118 | 56.8 | 7.2 | 2.0 | 377 |
| 1 Lloyd | 61.4 | 42.0 | 44 | 1 | 11.9 | 112 | 57.8 | 7.2 | 2 | 375 |
| 2 Lloyd | 62.0 | 45.5 | 44 | 1 | 12.8 | 116 | 56.4 | 7.3 | 2 | 400 |
| Lloyd | 61.7 | 43.8 | 44 | 1 | 12.3 | 114 | 57.1 | 7.2 | 2.0 | 388 |
| 1 Monroe | 62.2 | 42.4 | 54 | 1 | 12.9 | 113 | 59.3 | 7.2 | 2 | 345 |
| 2 Monroe | 62.2 | 46.5 | 63 | 1 | 13.5 | 116 | 56.4 | 7.2 | 3 | 400 |
| Monroe | 62.2 | 44.5 | 59 | 1 | 13.2 | 114 | 57.8 | 7.2 | 2.5 | 373 |
| 1 Renville | 63.3 | 43.5 | 45 | 1 | 12.8 | 118 | 62.4 | 6.9 | 2 | 368 |
| 2 Renville | 62.2 | 43.9 | 49 | 1 | 14.2 | 130 | 57.7 | 6.9 | 3 | 382 |
| Renville | 62.7 | 43.7 | 47 | 1 | 13.5 | 124 | 60.0 | 6.9 | 2.5 | 375 |
| 1 Medora | 63.0 | 42.4 | 58 | 1 | 14.0 | 124 | 56.9 | 7.1 | 2 | 360 |
| 2 Medora | 63.4 | 43.7 | 55 | 1 | 13.7 | 120 | 54.5 | 7.2 | 3 | 400 |
| Medora | 63.2 | 43.1 | 57 | 1 | 13.9 | 122 | 55.7 | 7.2 | 2.5 | 380 |
| 1 Sceptre | 61.3 | 39.8 | 43 | 2 | 12.7 | 109 | 59.1 | 7.1 | 2 | 352 |
| 2 Sceptre | 61.8 | 42.0 | 56 | 1 | 13.0 | 114 | 56.0 | 7.1 | 3 | 389 |
| Sceptre | 61.6 | 40.9 | 50 | 2 | 12.8 | 111 | 57.5 | 7.1 | 2.5 | 371 |
| 1 D87130 | 64.0 | 45.8 | 54 | 1 | 12.1 | 112 | 59.3 | 7.0 | 2 | 346 |
| 2 D87130 | 63.4 | 46.3 | 68 | 1 | 14.1 | 116 | 55.5 | 7.0 | 5 | 400 |
| D87130 | 63.7 | 46.1 | 61 | 1 | 13.1 | 114 | 57.4 | 7.0 | 3.5 | 373 |
| 1 D87240 | 61.7 | 43.7 | 47 | 1 | 12.0 | 109 | 56.0 | 7.3 | 2 | 373 |
| 2 D87240 | 62.4 | 46.5 | 63 | 0 | 13.1 | 120 | 56.8 | 7.2 | 5 | 400 |
| D87240 | 62.0 | 45.1 | 55 | 1 | 12.5 | 114 | 56.4 | 7.3 | 3.5 | 387 |
| 1 D88303 | 62.4 | 43.9 | 54 | 1 | 13.2 | 115 | 57.8 | 7.2 | 2 | 325 |
| 2 D88303 | 62.9 | 45.2 | 55 | 1 | 13.5 | 120 | 56.4 | 7.0 | 3 | 400 |
| D88303 | 62.6 | 44.6 | 55 | 1 | 13.3 | 118 | 57.1 | 7.1 | 2.5 | 363 |
| 1 D89135 | 63.0 | 41.5 | 45 | 1 | 13.2 | 111 | 58.3 | 7.4 | 5 | 370 |
| 2 D89135 | 63.0 | 43.1 | 56 | 1 | 14.3 | 118 | 57.8 | 7.3 | 3 | 400 |
| D89135 | 63.0 | 42.3 | 51 | 1 | 13.7 | 114 | 58.1 | 7.4 | 4.0 | 385 |
| 1 D901313 | 62.8 | 42.0 | 57 | 1 | 13.1 | 115 | 59.3 | 7.0 | 3 | 358 |
| 2 D901313 | 63.2 | 44.4 | 61 | 1 | 13.6 | 126 | 54.1 | 7.0 | 2 | 400 |
| D901313 | 63.0 | 43.2 | 59 | 1 | 13.3 | 120 | 56.7 | 7.0 | 2.5 | 379 |
| 1 D901419 | 62.8 | 38.9 | 25 | 1 | 12.8 | 119 | 58.2 | 7.0 | 3 | 344 |
| 2 D901419 | 63.0 | 38.5 | 23 | 2 | 13.3 | 122 | 57.3 | 6.9 | 2 | 400 |
| D901419 | 62.9 | 38.7 | 24 | 2 | 13.0 | 121 | 57.7 | 7.0 | 2.5 | 372 |

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Table 1 (Cont.)

Sidney, Mont.

Average of both Reps.

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 D901442 | 63.8 | 44.1 | 55 | 2 | 12.1 | 112 | 57.0 | 7.1 | 3 | 368 |
| 2 D901442 | 64.2 | 44.1 | 61 | 1 | 13.5 | 117 | 56.8 | 7.0 | 2 | 400 |
| D901442 | 64.0 | 44.1 | 58 | 2 | 12.8 | 115 | 56.9 | 7.0 | 2.5 | 384 |
| 1 D901486 | 60.6 | 39.8 | 49 | 1 | 12.8 | 110 | 60.0 | 7.1 | 3 | 346 |
| 2 D901486 | 61.3 | 41.0 | 43 | 1 | 13.6 | 115 | 58.2 | 7.1 | 2 | 400 |
| D901486 | 60.9 | 40.4 | 46 | 1 | 13.2 | 112 | 59.1 | 7.1 | 2.5 | 373 |
| 1 D901518 | 61.8 | 42.6 | 48 | 1 | 12.0 | 109 | 58.3 | 7.1 | 3 | 361 |
| 2 D901518 | 62.2 | 42.4 | 47 | 1 | 12.7 | 114 | 58.2 | 7.1 | 2 | 400 |
| D901518 | 62.0 | 42.5 | 48 | 1 | 12.3 | 111 | 58.3 | 7.1 | 2.5 | 381 |
| 1 D901536 | 62.6 | 40.0 | 38 | 2 | 12.8 | 119 | 58.7 | 7.1 | 2 | 346 |
| 2 D901536 | 63.7 | 43.7 | 53 | 1 | 13.5 | 116 | 59.6 | 7.1 | 2 | 394 |
| D901536 | 63.1 | 41.9 | 46 | 2 | 13.1 | 118 | 59.2 | 7.1 | 2.0 | 370 |
| 1 D901786 | 62.4 | 36.6 | 26 | 2 | 12.4 | 117 | 58.7 | 7.1 | 2 | 368 |
| 2 D901786 | 62.6 | 41.0 | 30 | 1 | 12.8 | 116 | 58.7 | 6.9 | 3 | 400 |
| D901786 | 62.5 | 38.8 | 28 | 2 | 12.6 | 116 | 58.7 | 7.0 | 2.5 | 384 |
| 1 D901155 | 63.4 | 41.2 | 46 | 1 | 12.9 | 122 | 55.9 | 7.2 | 2 | 365 |
| 2 D901155 | 63.6 | 42.4 | 53 | 1 | 13.5 | 117 | 55.5 | 7.1 | 2 | 400 |
| D901155 | 63.5 | 41.8 | 50 | 1 | 13.2 | 119 | 55.7 | 7.2 | 2.0 | 383 |
| 1 D91058 | 63.4 | 42.6 | 62 | 0 | 13.0 | 128 | 57.3 | 7.5 | 2 | 359 |
| 2 D91058 | 63.1 | 46.9 | 70 | 0 | 13.9 | 115 | 58.3 | 7.3 | 3 | 400 |
| D91058 | 63.2 | 44.8 | 66 | 0 | 13.5 | 121 | 57.8 | 7.4 | 2.5 | 380 |
| 1 D91066 | 62.8 | 43.7 | 61 | 1 | 13.5 | 124 | 56.4 | 7.3 | 2 | 356 |
| 2 D91066 | 63.0 | 45.2 | 67 | 1 | 14.0 | 121 | 57.4 | 7.3 | 2 | 400 |
| D91066 | 62.9 | 44.5 | 64 | 1 | 13.7 | 123 | 56.9 | 7.3 | 2.0 | 378 |
| 1 D91103 | 64.4 | 43.7 | 66 | 0 | 14.5 | 122 | 58.2 | 7.2 | 2 | 367 |
| 2 D91103 | 64.2 | 46.1 | 74 | 1 | 14.3 | 117 | 58.2 | 7.3 | 2 | 400 |
| D91103 | 64.3 | 44.9 | 70 | 1 | 14.4 | 119 | 58.2 | 7.2 | 2.0 | 384 |
| 1 D91180 | 62.8 | 42.0 | 54 | 1 | 13.3 | 119 | 56.4 | 7.1 | 2 | 327 |
| 2 D91180 | 63.0 | 45.5 | 56 | 1 | 13.7 | 119 | 58.3 | 7.1 | 2 | 400 |
| D91180 | 62.9 | 43.8 | 55 | 1 | 13.5 | 119 | 57.3 | 7.1 | 2.0 | 364 |
| 1 D91309 | 62.8 | 43.1 | 62 | 0 | 13.1 | 126 | 57.4 | 7.1 | 2 | 334 |
| 2 D91309 | 62.1 | 45.0 | 63 | 0 | 14.3 | 122 | 57.3 | 7.2 | 2 | 400 |
| D91309 | 62.4 | 44.1 | 63 | 0 | 13.7 | 124 | 57.3 | 7.2 | 2.0 | 367 |
| 1 D91321 | 62.6 | 41.3 | 37 | 2 | 12.2 | 116 | 56.5 | 7.4 | 3 | 362 |
| 2 D91321 | 62.0 | 45.0 | 47 | 0 | 13.5 | 120 | 57.3 | 7.2 | 3 | 400 |
| D91321 | 62.3 | 43.2 | 42 | 1 | 12.8 | 118 | 56.9 | 7.3 | 3.0 | 381 |
| 1 D91306 | 62.0 | 42.2 | 54 | 1 | 11.8 | 119 | 56.0 | 7.2 | 2 | 325 |
| 2 D91306 | 62.2 | 45.5 | 63 | 1 | 12.9 | 109 | 57.3 | 7.1 | 2 | 400 |
| D91306 | 62.1 | 43.9 | 59 | 1 | 12.3 | 114 | 56.6 | 7.1 | 2.0 | 363 |
| 1 D91076 | 62.0 | 40.7 | 35 | 1 | 12.0 | 108 | 57.3 | 7.5 | 2 | 385 |
| 2 D91076 | 62.4 | 43.7 | 42 | 2 | 13.0 | 112 | 55.0 | 7.4 | 2 | 400 |
| D91076 | 62.2 | 42.2 | 39 | 2 | 12.5 | 110 | 56.1 | 7.4 | 2.0 | 393 |
| 1 D91080 | 63.5 | 42.6 | 45 | 1 | 12.2 | 117 | 55.5 | 7.2 | 1 | 400 |
| 2 D91080 | 62.2 | 45.7 | 57 | 1 | 12.9 | 113 | 57.8 | 7.2 | 2 | 400 |
| D91080 | 62.8 | 44.2 | 51 | 1 | 12.5 | 115 | 56.6 | 7.2 | 1.5 | 400 |
| 1 D91410 | 65.0 | 41.7 | 33 | 2 | 12.4 | 116 | 56.0 | 7.2 | 2 | 400 |
| 2 D91410 | 63.3 | 41.3 | 32 | 2 | 12.5 | 122 | 58.2 | 7.2 | 2 | 400 |
| D91410 | 64.2 | 41.5 | 33 | 2 | 12.4 | 119 | 57.1 | 7.2 | 2.0 | 400 |

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Table 2

Carrington, ND

Average of both Reps.

Fargo, ND

| VARIETY | Rep. # | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|-----------------|--------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| 1 Mindum | | 54.9 | 28.5 | 19 | 4 | 14.0 | 95 | 64.5 | 6.4 | 2 | 358 |
| 2 Mindum | | 56.4 | 30.5 | 23 | 2 | 14.3 | 97 | 62.6 | 6.6 | 1 | 339 |
| Mindum | | 55.6 | 29.5 | 21 | 3 | 14.1 | 96 | 63.6 | 6.5 | 1.5 | 349 |
| 1 Munich | | 55.1 | 28.7 | 23 | 3 | 14.9 | 101 | 66.4 | 6.9 | 3 | 379 |
| 2 Munich | | 56.6 | 32.5 | 41 | 2 | 14.6 | 96 | 66.0 | 6.9 | 4 | 385 |
| Munich | | 55.9 | 30.6 | 32 | 3 | 14.7 | 99 | 66.2 | 6.9 | 3.5 | 382 |
| 1 Ward | | 55.1 | 29.3 | 23 | 3 | 15.1 | 104 | 64.8 | 6.8 | 1 | 334 |
| 2 Ward | | 55.3 | 31.0 | 26 | 3 | 15.3 | 104 | 63.8 | 6.9 | 1 | 386 |
| Ward | | 55.2 | 30.2 | 25 | 3 | 15.2 | 104 | 64.3 | 6.9 | 1.0 | 360 |
| 1 Rugby | | 55.1 | 28.2 | 22 | 4 | 14.6 | 104 | 64.2 | 7.0 | 1 | 329 |
| 2 Rugby | | 55.8 | 30.5 | 21 | 3 | 14.8 | 104 | 62.6 | 7.0 | 1 | 369 |
| Rugby | | 55.5 | 29.4 | 22 | 4 | 14.7 | 104 | 63.4 | 7.0 | 1.0 | 349 |
| 1 Vic | | 55.6 | 33.1 | 36 | 2 | 15.2 | 114 | 64.8 | 7.1 | 3 | 341 |
| 2 Vic | | 56.1 | 34.4 | 44 | 1 | 15.6 | 106 | 67.0 | 6.9 | 5 | 396 |
| Vic | | 55.8 | 33.8 | 40 | 2 | 15.4 | 110 | 65.9 | 7.0 | 4.0 | 369 |
| 1 Lloyd | | 47.6 | 24.0 | 5 | 14 | 15.4 | 98 | 58.9 | 7.1 | 4 | 400 |
| 2 Lloyd | | 49.4 | 26.9 | 13 | 10 | 15.3 | 92 | 60.7 | 6.9 | 4 | 400 |
| Lloyd | | 48.5 | 25.5 | 9 | 12 | 15.3 | 95 | 59.8 | 7.0 | 4.0 | 400 |
| 1 Monroe | | 52.1 | 28.1 | 20 | 4 | 14.5 | 93 | 65.1 | 6.9 | 4 | 400 |
| 2 Monroe | | 53.0 | 31.6 | 30 | 3 | 14.6 | 93 | 63.6 | 6.9 | 3 | 400 |
| Monroe | | 52.6 | 29.9 | 25 | 4 | 14.5 | 93 | 64.3 | 6.9 | 3.5 | 400 |
| 1 Renville | | 54.6 | 29.5 | 15 | 5 | 15.0 | 109 | 65.4 | 6.9 | 6 | 407 |
| 2 Renville | | 56.8 | 33.7 | 25 | 3 | 14.9 | 111 | 65.7 | 6.9 | 3 | 377 |
| Renville | | 55.7 | 31.6 | 20 | 4 | 15.0 | 110 | 65.6 | 6.9 | 4.5 | 392 |
| 1 Medora | | 52.5 | 26.9 | 21 | 4 | 16.3 | 110 | 60.2 | 6.9 | 6 | 349 |
| 2 Medora | | 55.3 | 29.3 | 27 | 3 | 15.5 | 107 | 61.1 | 7.1 | 3 | 393 |
| Medora | | 53.9 | 28.1 | 24 | 4 | 15.9 | 109 | 60.6 | 7.0 | 4.5 | 371 |
| 1 Sceptre | | 54.1 | 28.9 | 24 | 4 | 15.5 | 108 | 64.5 | 6.9 | 3 | 400 |
| 2 Sceptre | | 55.7 | 30.7 | 30 | 3 | 15.2 | 102 | 64.5 | 6.9 | 6 | 400 |
| Sceptre | | 54.9 | 29.8 | 27 | 4 | 15.4 | 105 | 64.5 | 6.9 | 4.5 | 400 |
| 1 D87130 | | 56.1 | 31.7 | 34 | 2 | 14.9 | 101 | 66.0 | 6.7 | 3 | 400 |
| 2 D87130 | | 56.6 | 31.9 | 31 | 2 | 14.8 | 98 | 64.8 | 6.8 | 6 | 400 |
| D87130 | | 56.3 | 31.8 | 33 | 2 | 14.9 | 100 | 65.4 | 6.7 | 4.5 | 400 |
| 1 D87240 | | 53.8 | 33.1 | 44 | 1 | 15.0 | 103 | 63.6 | 7.1 | 5 | 400 |
| 2 D87240 | | 54.7 | 33.8 | 45 | 1 | 14.5 | 103 | 64.5 | 7.0 | 6 | 400 |
| D87240 | | 54.3 | 33.5 | 45 | 1 | 14.8 | 103 | 64.0 | 7.0 | 5.5 | 400 |
| 1 D88303 | | 52.8 | 26.0 | 12 | 7 | 14.8 | 102 | 62.0 | 7.0 | 5 | 396 |
| 2 D88303 | | 54.0 | 28.8 | 17 | 4 | 14.8 | 95 | 62.6 | 6.9 | 5 | 368 |
| D88303 | | 53.4 | 27.4 | 15 | 6 | 14.8 | 99 | 62.3 | 6.9 | 5.0 | 382 |
| 1 D89135 | | 55.5 | 33.3 | 39 | 1 | 15.6 | 108 | 65.1 | 7.1 | 5 | 395 |
| 2 D89135 | | 56.2 | 34.0 | 45 | 1 | 16.0 | 105 | 63.9 | 7.1 | 5 | 307 |
| D89135 | | 55.9 | 33.7 | 42 | 1 | 15.8 | 107 | 64.5 | 7.1 | 5.0 | 351 |
| 1 D901313 | | 54.6 | 30.9 | 25 | 4 | 14.5 | 108 | 63.0 | 6.7 | 2 | 367 |
| 2 D901313 | | 55.6 | 33.3 | 38 | 2 | 14.8 | 109 | 63.6 | 6.8 | 4 | 316 |
| D901313 | | 55.1 | 32.1 | 32 | 3 | 14.7 | 109 | 63.3 | 6.7 | 3.0 | 342 |
| 1 D901419 | | 56.3 | 29.0 | 17 | 5 | 15.2 | 106 | 63.0 | 6.6 | 2 | 400 |
| 2 D901419 | | 55.6 | 28.7 | 14 | 4 | 15.9 | 103 | 63.2 | 6.6 | 4 | 400 |
| D901419 | | 56.0 | 28.9 | 16 | 5 | 15.5 | 105 | 63.1 | 6.6 | 3.0 | 400 |

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Table 2 (Cont.)

| Carrington, ND | | | | | Average of both Reps. | | | | | |
|----------------|-------------|-------------|-----------|----------|-----------------------|----------------------|-------------|---------------|-------------|-------------------|
| | | | | | Fargo, ND | | | | | |
| VARIETY | TW | KWT | LG | SM | WHEAT PRO | NIR HARD- NESS | SEMO EXT | SEMO COLOR | MIXO PAT | FALLING NUMBER |
| Rep. # | (lb/bu) | (grams) | (%) | (%) | (14% mb) | | (%) | | | (Sec) |
| 1 D901442 | 58.2 | 33.9 | 41 | 2 | 14.5 | 110 | 64.8 | 6.8 | 2 | 395 |
| 2 D901442 | 57.2 | 33.0 | 38 | 2 | 15.3 | 101 | 66.0 | 6.8 | 3 | 400 |
| D901442 | 57.7 | 33.5 | 40 | 2 | 14.9 | 106 | 65.4 | 6.8 | 2.5 | 398 |
| 1 D901486 | 54.1 | 31.2 | 34 | 3 | 14.8 | 99 | 63.6 | 6.9 | 2 | 402 |
| 2 D901486 | 55.3 | 34.4 | 51 | 2 | 14.8 | 90 | 64.5 | 6.8 | 3 | 371 |
| D901486 | 54.7 | 32.8 | 43 | 3 | 14.8 | 95 | 64.0 | 6.9 | 2.5 | 387 |
| 1 D901518 | 55.4 | 30.7 | 29 | 4 | 14.4 | 98 | 63.6 | 7.0 | 2 | 392 |
| 2 D901518 | 56.3 | 31.8 | 39 | 2 | 14.1 | 93 | 65.4 | 6.8 | 3 | 366 |
| D901518 | 55.9 | 31.3 | 34 | 3 | 14.3 | 96 | 64.5 | 6.9 | 2.5 | 379 |
| 1 D901536 | 55.2 | 28.5 | 20 | 4 | 15.4 | 104 | 62.6 | 6.9 | 2 | 330 |
| 2 D901536 | 55.6 | 31.8 | 35 | 2 | 15.2 | 93 | 63.6 | 6.8 | 4 | 372 |
| D901536 | 55.4 | 30.2 | 28 | 3 | 15.3 | 99 | 63.1 | 6.8 | 3.0 | 351 |
| 1 D901786 | 53.0 | 25.8 | 10 | 5 | 14.3 | 96 | 62.3 | 6.7 | 2 | 414 |
| 2 D901786 | 53.8 | 27.6 | 14 | 7 | 14.2 | 86 | 61.7 | 6.7 | 3 | 400 |
| D901786 | 53.4 | 26.7 | 12 | 6 | 14.3 | 91 | 62.0 | 6.7 | 2.5 | 407 |
| 1 D901155 | 55.9 | 30.7 | 29 | 2 | 15.1 | 104 | 63.6 | 7.1 | 5 | 364 |
| 2 D901155 | 57.0 | 31.9 | 40 | 1 | 15.4 | 106 | 63.9 | 7.0 | 4 | 370 |
| D901155 | 56.5 | 31.3 | 35 | 2 | 15.3 | 105 | 63.7 | 7.1 | 4.5 | 367 |
| 1 D91058 | 53.9 | 29.8 | 43 | 2 | 15.1 | 106 | 65.1 | 7.1 | 5 | 360 |
| 2 D91058 | 55.9 | 34.5 | 53 | 1 | 15.1 | 95 | 65.4 | 7.1 | 3 | 342 |
| D91058 | 54.9 | 32.2 | 48 | 2 | 15.1 | 101 | 65.3 | 7.1 | 4.0 | 351 |
| 1 D91066 | 55.4 | 33.9 | 47 | 2 | 15.6 | 108 | 65.4 | 7.0 | 4 | 366 |
| 2 D91066 | 55.2 | 33.2 | 48 | 1 | 15.7 | 99 | 66.0 | 7.1 | 3 | 400 |
| D91066 | 55.3 | 33.6 | 48 | 2 | 15.6 | 104 | 65.7 | 7.1 | 3.5 | 383 |
| 1 D91103 | 57.4 | 34.6 | 52 | 1 | 14.7 | 105 | 64.5 | 7.0 | 4 | 300 |
| 2 D91103 | 57.6 | 34.2 | 57 | 1 | 15.3 | 97 | 65.1 | 6.9 | 3 | 266 |
| D91103 | 57.5 | 34.4 | 55 | 1 | 15.0 | 101 | 64.8 | 7.0 | 3.5 | 283 |
| 1 D91180 | 54.6 | 27.9 | 10 | 6 | 15.3 | 96 | 61.3 | 7.0 | 4 | 400 |
| 2 D91180 | 54.6 | 30.7 | 19 | 3 | 15.7 | 103 | 61.1 | 7.0 | 4 | 433 |
| D91180 | 54.6 | 29.3 | 15 | 5 | 15.5 | 100 | 61.2 | 7.0 | 4.0 | 417 |
| 1 D91309 | 56.0 | 32.7 | 37 | 3 | 14.4 | 109 | 65.1 | 7.1 | 3 | 316 |
| 2 D91309 | 55.8 | 34.0 | 39 | 2 | 14.5 | 102 | 63.9 | 7.1 | 3 | 375 |
| D91309 | 55.9 | 33.4 | 38 | 3 | 14.5 | 106 | 64.5 | 7.1 | 3.0 | 346 |
| 1 D91321 | 54.6 | 30.5 | 22 | 4 | 14.6 | 104 | 63.6 | 7.2 | 4 | 400 |
| 2 D91321 | 55.8 | 33.2 | 34 | 3 | 14.5 | 101 | 63.0 | 7.1 | 4 | 400 |
| D91321 | 55.2 | 31.9 | 28 | 4 | 14.6 | 103 | 63.3 | 7.1 | 4.0 | 400 |
| 1 D91306 | 54.6 | 31.8 | 37 | 2 | 14.5 | 94 | 64.5 | 7.0 | 3 | 352 |
| 2 D91306 | 54.9 | 33.7 | 42 | 2 | 14.8 | 102 | 62.6 | 6.9 | 3 | 363 |
| D91306 | 54.7 | 32.8 | 40 | 2 | 14.7 | 98 | 63.6 | 7.0 | 3.0 | 358 |
| 1 D91076 | 51.8 | 26.5 | 9 | 10 | 14.8 | 93 | 65.1 | 7.0 | 4 | 400 |
| 2 D91076 | 53.4 | 27.5 | 16 | 6 | 14.5 | 83 | 64.2 | 7.1 | 4 | 400 |
| D91076 | 52.6 | 27.0 | 13 | 8 | 14.6 | 88 | 64.6 | 7.0 | 4.0 | 400 |
| 1 D91080 | 54.0 | 29.2 | 19 | 5 | 14.1 | 94 | 63.9 | 7.1 | 3 | 400 |
| 2 D91080 | 55.0 | 27.6 | 20 | 5 | 14.2 | 93 | 63.6 | 6.9 | 4 | 400 |
| D91080 | 54.5 | 28.4 | 20 | 5 | 14.1 | 94 | 63.7 | 7.0 | 3.5 | 400 |
| 1 D91410 | 54.1 | 27.2 | 7 | 8 | 14.0 | 102 | 61.7 | 7.0 | 3 | 400 |
| 2 D91410 | 54.2 | 28.5 | 10 | 7 | 14.1 | 98 | 60.7 | 6.9 | 4 | 400 |
| D91410 | 54.1 | 27.9 | 9 | 8 | 14.1 | 100 | 61.2 | 7.0 | 3.5 | 400 |

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Table 3

Minot, ND

Average of both Reps.

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|-----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 Mindum | 62.6 | 44.1 | 65 | 2 | 15.4 | 111 | 62.3 | 6.5 | 2 | 400 |
| 2 Mindum | 62.4 | 42.9 | 66 | 1 | 15.3 | 110 | 59.6 | 6.5 | 1 | 400 |
| Mindum | 62.5 | 43.5 | 66 | 2 | 15.3 | 111 | 60.9 | 6.5 | 1.5 | 400 |
| 1 Munich | 61.4 | 42.9 | 64 | 2 | 15.5 | 113 | 63.0 | 6.8 | 2 | 400 |
| 2 Munich | 61.2 | 43.9 | 65 | 1 | 15.6 | 111 | 62.0 | 6.9 | 5 | 400 |
| Munich | 61.3 | 43.4 | 65 | 2 | 15.5 | 112 | 62.5 | 6.9 | 3.5 | 400 |
| 1 Ward | 61.3 | 40.2 | 62 | 2 | 15.9 | 120 | 60.7 | 6.9 | 1 | 386 |
| 2 Ward | 61.2 | 40.2 | 59 | 3 | 15.8 | 117 | 60.7 | 6.9 | 2 | 394 |
| Ward | 61.2 | 40.2 | 61 | 3 | 15.8 | 119 | 60.7 | 6.9 | 1.5 | 390 |
| 1 Rugby | 61.3 | 41.0 | 58 | 2 | 15.5 | 114 | 60.7 | 6.9 | 1 | 399 |
| 2 Rugby | 61.8 | 39.8 | 58 | 3 | 15.5 | 119 | 60.2 | 6.9 | 2 | 390 |
| Rugby | 61.5 | 40.4 | 58 | 3 | 15.5 | 117 | 60.5 | 6.9 | 1.5 | 395 |
| 1 Vic | 60.6 | 44.6 | 66 | 2 | 16.1 | 118 | 59.8 | 7.0 | 3 | 397 |
| 2 Vic | 60.6 | 44.8 | 65 | 1 | 16.0 | 116 | 59.8 | 6.9 | 3 | 388 |
| Vic | 60.6 | 44.7 | 66 | 2 | 16.0 | 117 | 59.8 | 7.0 | 3.0 | 393 |
| 1 Lloyd | 59.4 | 43.1 | 58 | 2 | 14.8 | 107 | 59.3 | 6.9 | 2 | 362 |
| 2 Lloyd | 59.0 | 44.6 | 55 | 3 | 15.0 | 107 | 58.7 | 6.8 | 2 | 390 |
| Lloyd | 59.2 | 43.9 | 57 | 3 | 14.9 | 107 | 59.0 | 6.8 | 2.0 | 376 |
| 1 Monroe | 61.1 | 45.8 | 69 | 1 | 15.3 | 120 | 59.8 | 7.0 | 3 | 400 |
| 2 Monroe | 61.1 | 44.2 | 69 | 1 | 15.4 | 113 | 58.3 | 7.0 | 6 | 400 |
| Monroe | 61.1 | 45.0 | 69 | 1 | 15.3 | 117 | 59.1 | 7.0 | 4.5 | 400 |
| 1 Renville | 61.3 | 42.7 | 53 | 3 | 16.0 | 122 | 61.1 | 6.7 | 3 | 400 |
| 2 Renville | 61.0 | 41.8 | 54 | 3 | 16.0 | 118 | 60.2 | 6.8 | 5 | 400 |
| Renville | 61.2 | 42.3 | 54 | 3 | 16.0 | 120 | 60.6 | 6.8 | 4.0 | 400 |
| 1 Medora | 58.9 | 40.8 | 61 | 3 | 17.5 | 117 | 54.6 | 6.9 | 3 | 351 |
| 2 Medora | 59.0 | 40.7 | 60 | 3 | 17.4 | 115 | 56.5 | 6.9 | 3 | 381 |
| Medora | 58.9 | 40.8 | 61 | 3 | 17.4 | 116 | 55.6 | 6.9 | 3.0 | 366 |
| 1 Sceptre | 60.1 | 40.3 | 59 | 2 | 15.7 | 114 | 59.3 | 6.9 | 4 | 400 |
| 2 Sceptre | 60.3 | 40.0 | 55 | 2 | 15.7 | 113 | 59.3 | 6.8 | 3 | 400 |
| Sceptre | 60.2 | 40.2 | 57 | 2 | 15.7 | 114 | 59.3 | 6.9 | 3.5 | 400 |
| 1 D87130 | 61.4 | 45.7 | 69 | 2 | 15.6 | 119 | 59.3 | 6.6 | 4 | 400 |
| 2 D87130 | 61.8 | 47.1 | 72 | 2 | 15.7 | 114 | 59.8 | 6.8 | 3 | 400 |
| D87130 | 61.6 | 46.4 | 71 | 2 | 15.6 | 117 | 59.5 | 6.7 | 3.5 | 400 |
| 1 D87240 | 59.4 | 46.3 | 68 | 3 | 15.8 | 113 | 60.2 | 6.9 | 4 | 400 |
| 2 D87240 | 58.8 | 45.2 | 66 | 2 | 15.8 | 104 | 59.3 | 7.0 | 4 | 352 |
| D87240 | 59.1 | 45.8 | 67 | 3 | 15.8 | 109 | 59.7 | 7.0 | 4.0 | 376 |
| 1 D88303 | 60.6 | 45.2 | 67 | 2 | 15.5 | 119 | 58.7 | 6.8 | 4 | 304 |
| 2 D88303 | 61.5 | 42.6 | 66 | 2 | 15.6 | 115 | 57.8 | 6.9 | 3 | 294 |
| D88303 | 61.0 | 43.9 | 67 | 2 | 15.5 | 117 | 58.3 | 6.9 | 3.5 | 299 |
| 1 D89135 | 61.0 | 41.8 | 63 | 2 | 16.5 | 121 | 60.2 | 7.1 | 5 | 356 |
| 2 D89135 | 60.6 | 43.7 | 63 | 2 | 16.6 | 115 | 61.1 | 7.0 | 3 | 400 |
| D89135 | 60.8 | 42.8 | 63 | 2 | 16.5 | 118 | 60.6 | 7.1 | 4.0 | 378 |
| 1 D901313 | 60.6 | 43.7 | 62 | 3 | 16.1 | 119 | 58.3 | 6.7 | 3 | 400 |
| 2 D901313 | 61.0 | 43.9 | 61 | 3 | 16.1 | 120 | 60.2 | 6.6 | 2 | 375 |
| D901313 | 60.8 | 43.8 | 62 | 3 | 16.1 | 120 | 59.3 | 6.7 | 2.5 | 388 |
| 1 D901419 | 61.8 | 38.2 | 43 | 4 | 16.2 | 119 | 57.4 | 6.7 | 3 | 400 |
| 2 D901419 | 61.5 | 38.3 | 41 | 3 | 16.0 | 115 | 56.5 | 6.7 | 2 | 400 |
| D901419 | 61.6 | 38.3 | 42 | 4 | 16.1 | 117 | 56.9 | 6.7 | 2.5 | 400 |

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Table 3 (Cont.)

Minot, ND

Average of both Reps.

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 D901442 | 61.0 | 42.7 | 66 | 2 | 16.3 | 116 | 58.3 | 6.8 | 3 | 400 |
| 2 D901442 | 60.9 | 42.2 | 65 | 2 | 16.6 | 114 | 57.4 | 6.7 | 2 | 400 |
| D901442 | 61.0 | 42.5 | 66 | 2 | 16.4 | 115 | 57.9 | 6.8 | 2.5 | 400 |
| 1 D901486 | 59.9 | 40.5 | 51 | 3 | 15.5 | 109 | 60.2 | 7.1 | 3 | 400 |
| 2 D901486 | 59.4 | 40.8 | 52 | 4 | 15.5 | 108 | 62.3 | 6.8 | 3 | 398 |
| D901486 | 59.7 | 40.7 | 52 | 4 | 15.5 | 109 | 61.2 | 7.0 | 3.0 | 399 |
| 1 D901518 | 60.5 | 42.0 | 56 | 3 | 15.2 | 111 | 57.9 | 6.9 | 3 | 400 |
| 2 D901518 | 59.9 | 40.0 | 56 | 2 | 15.2 | 108 | 59.8 | 6.8 | 4 | 394 |
| D901518 | 60.2 | 41.0 | 56 | 3 | 15.2 | 110 | 58.9 | 6.9 | 3.5 | 397 |
| 1 D901536 | 61.4 | 41.3 | 63 | 2 | 15.9 | 122 | 59.3 | 6.8 | 3 | 338 |
| 2 D901536 | 61.9 | 41.5 | 65 | 2 | 15.8 | 114 | 61.7 | 6.8 | 2 | 342 |
| D901536 | 61.7 | 41.4 | 64 | 2 | 15.8 | 118 | 60.5 | 6.8 | 2.5 | 340 |
| 1 D901786 | 61.8 | 38.5 | 47 | 3 | 15.1 | 113 | 57.8 | 6.8 | 2 | 400 |
| 2 D901786 | 61.4 | 39.4 | 45 | 4 | 14.9 | 110 | 58.7 | 6.8 | 2 | 400 |
| D901786 | 61.6 | 39.0 | 46 | 4 | 15.0 | 112 | 58.3 | 6.8 | 2.0 | 400 |
| 1 D901155 | 62.2 | 41.8 | 68 | 2 | 16.2 | 113 | 56.5 | 6.9 | 3 | 400 |
| 2 D901155 | 61.8 | 41.0 | 65 | 2 | 16.2 | 117 | 57.4 | 6.9 | 2 | 400 |
| D901155 | 62.0 | 41.4 | 67 | 2 | 16.2 | 115 | 56.9 | 6.9 | 2.5 | 400 |
| 1 D91058 | 60.0 | 44.4 | 68 | 2 | 16.6 | 114 | 58.7 | 7.0 | 5 | 391 |
| 2 D91058 | 59.9 | 41.8 | 66 | 3 | 16.8 | 122 | 59.3 | 7.0 | 2 | 400 |
| D91058 | 60.0 | 43.1 | 67 | 3 | 16.7 | 118 | 59.0 | 7.0 | 3.5 | 396 |
| 1 D91066 | 59.8 | 44.4 | 70 | 2 | 17.6 | 118 | 57.4 | 7.0 | 5 | 390 |
| 2 D91066 | 59.0 | 42.7 | 68 | 3 | 17.7 | 116 | 58.3 | 7.0 | 2 | 377 |
| D91066 | 59.4 | 43.6 | 69 | 3 | 17.7 | 117 | 57.9 | 7.0 | 3.5 | 384 |
| 1 D91103 | 59.8 | 42.9 | 72 | 1 | 18.0 | 110 | 57.8 | 6.8 | 5 | 355 |
| 2 D91103 | 59.7 | 42.6 | 72 | 2 | 17.9 | 111 | 56.9 | 6.8 | 3 | 323 |
| D91103 | 59.8 | 42.8 | 72 | 2 | 17.9 | 111 | 57.3 | 6.8 | 4.0 | 339 |
| 1 D91180 | 60.8 | 42.6 | 59 | 3 | 16.0 | 112 | 58.7 | 6.8 | 3 | 367 |
| 2 D91180 | 60.3 | 43.1 | 56 | 4 | 16.3 | 111 | 59.6 | 6.9 | 3 | 349 |
| D91180 | 60.6 | 42.9 | 58 | 4 | 16.1 | 112 | 59.2 | 6.9 | 3.0 | 358 |
| 1 D91309 | 59.8 | 43.5 | 66 | 2 | 16.1 | 116 | 59.3 | 6.9 | 3 | 400 |
| 2 D91309 | 60.1 | 42.7 | 61 | 2 | 16.0 | 114 | 58.3 | 7.0 | 3 | 371 |
| D91309 | 60.0 | 43.1 | 64 | 2 | 16.0 | 115 | 58.8 | 7.0 | 3.0 | 386 |
| 1 D91321 | 59.7 | 41.5 | 52 | 3 | 15.4 | 112 | 58.7 | 7.0 | 3 | 400 |
| 2 D91321 | 59.9 | 41.2 | 52 | 4 | 15.8 | 119 | 57.9 | 7.0 | 3 | 390 |
| D91321 | 59.8 | 41.4 | 52 | 4 | 15.6 | 116 | 58.3 | 7.0 | 3.0 | 395 |
| 1 D91306 | 60.6 | 41.7 | 63 | 2 | 15.2 | 113 | 58.9 | 7.0 | 3 | 400 |
| 2 D91306 | 60.9 | 41.3 | 62 | 2 | 15.2 | 114 | 56.9 | 7.0 | 3 | 400 |
| D91306 | 60.7 | 41.5 | 63 | 2 | 15.2 | 114 | 57.9 | 7.0 | 3.0 | 400 |
| 1 D91076 | 59.5 | 43.5 | 54 | 4 | 15.8 | 108 | 59.3 | 7.2 | 2 | 400 |
| 2 D91076 | 59.1 | 41.8 | 57 | 3 | 15.8 | 112 | 57.5 | 7.2 | 3 | 400 |
| D91076 | 59.3 | 42.7 | 56 | 4 | 15.8 | 110 | 58.4 | 7.2 | 2.5 | 400 |
| 1 D91080 | 59.1 | 41.7 | 66 | 3 | 15.6 | 111 | 56.0 | 6.8 | 2 | 400 |
| 2 D91080 | 59.0 | 45.5 | 66 | 2 | 16.5 | 112 | 58.3 | 6.8 | 3 | 347 |
| D91080 | 59.1 | 43.6 | 66 | 3 | 16.0 | 112 | 57.1 | 6.8 | 2.5 | 374 |
| 1 D91410 | 60.0 | 40.3 | 45 | 3 | 15.6 | 113 | 58.7 | 6.9 | 2 | 400 |
| 2 D91410 | 60.9 | 40.0 | 45 | 4 | 15.7 | 111 | 57.4 | 6.9 | 3 | 400 |
| D91410 | 60.4 | 40.2 | 45 | 4 | 15.7 | 112 | 58.1 | 6.9 | 2.5 | 400 |

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Table 4

Williston, ND

Average of both Reps.

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|-----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 Mindum | 62.3 | 40.0 | 61 | 1 | 14.9 | 115 | 63.8 | 6.6 | 2 | 400 |
| 2 Mindum | 62.3 | 44.6 | 66 | 0 | 15.2 | 114 | 64.5 | 6.6 | 1 | 331 |
| Mindum | 62.3 | 42.3 | 64 | 1 | 15.1 | 115 | 64.1 | 6.6 | 1.5 | 366 |
| 1 Munich | 63.0 | 45.0 | 68 | 1 | 15.7 | 114 | 64.5 | 7.2 | 3 | 398 |
| 2 Munich | 62.9 | 46.1 | 70 | 0 | 16.0 | 114 | 65.5 | 7.1 | 3 | 400 |
| Munich | 62.9 | 45.6 | 69 | 1 | 15.9 | 114 | 65.0 | 7.1 | 3.0 | 399 |
| 1 Ward | 62.9 | 43.9 | 67 | 1 | 16.2 | 120 | 62.9 | 7.0 | 1 | 379 |
| 2 Ward | 62.6 | 42.9 | 65 | 0 | 16.7 | 128 | 62.6 | 7.0 | 1 | 352 |
| Ward | 62.8 | 43.4 | 66 | 1 | 16.5 | 124 | 62.7 | 7.0 | 1.0 | 366 |
| 1 Rugby | 62.6 | 43.5 | 67 | 1 | 15.9 | 124 | 63.8 | 7.0 | 1 | 372 |
| 2 Rugby | 62.8 | 41.5 | 60 | 1 | 15.8 | 123 | 63.6 | 6.9 | 1 | 399 |
| Rugby | 62.7 | 42.5 | 64 | 1 | 15.9 | 124 | 63.7 | 7.0 | 1.0 | 386 |
| 1 Vic | 61.4 | 46.1 | 66 | 1 | 16.2 | 125 | 63.2 | 7.2 | 3 | 382 |
| 2 Vic | 61.6 | 45.8 | 70 | 0 | 16.1 | 119 | 66.0 | 7.0 | 2 | 346 |
| Vic | 61.5 | 46.0 | 68 | 1 | 16.2 | 122 | 64.6 | 7.1 | 2.5 | 364 |
| 1 Lloyd | 61.4 | 47.1 | 59 | 2 | 14.5 | 110 | 63.2 | 7.3 | 2 | 400 |
| 2 Lloyd | 61.6 | 48.1 | 63 | 2 | 15.0 | 119 | 64.2 | 7.1 | 2 | 400 |
| Lloyd | 61.5 | 47.6 | 61 | 2 | 14.8 | 115 | 63.7 | 7.2 | 2.0 | 400 |
| 1 Monroe | 61.9 | 49.5 | 78 | 1 | 16.2 | 120 | 65.4 | 7.1 | 2 | 400 |
| 2 Monroe | 61.0 | 45.2 | 66 | 0 | 16.3 | 115 | 64.8 | 6.9 | 2 | 360 |
| Monroe | 61.5 | 47.4 | 72 | 1 | 16.2 | 118 | 65.1 | 7.0 | 2.0 | 380 |
| 1 Renville | 61.8 | 44.2 | 58 | 1 | 15.6 | 120 | 67.0 | 7.0 | 2 | 400 |
| 2 Renville | 62.1 | 42.7 | 56 | 2 | 16.1 | 126 | 66.0 | 6.8 | 2 | 400 |
| Renville | 61.9 | 43.5 | 57 | 2 | 15.9 | 123 | 66.5 | 6.9 | 2.0 | 400 |
| 1 Medora | 62.4 | 42.6 | 69 | 1 | 16.9 | 121 | 61.3 | 7.2 | 6 | 400 |
| 2 Medora | 63.6 | 43.1 | 69 | 0 | 16.9 | 133 | 60.2 | 7.1 | 2 | 370 |
| Medora | 63.0 | 42.9 | 69 | 1 | 16.9 | 127 | 60.8 | 7.1 | 4.0 | 385 |
| 1 Sceptre | 61.9 | 41.7 | 63 | 1 | 16.3 | 120 | 64.5 | 7.0 | 6 | 400 |
| 2 Sceptre | 62.0 | 41.7 | 65 | 1 | 16.3 | 122 | 65.1 | 6.9 | 6 | 400 |
| Sceptre | 62.0 | 41.7 | 64 | 1 | 16.3 | 121 | 64.8 | 7.0 | 6.0 | 400 |
| 1 D87130 | 62.6 | 48.1 | 78 | 0 | 16.1 | 117 | 63.2 | 7.0 | 5 | 400 |
| 2 D87130 | 63.1 | 46.5 | 75 | 0 | 16.3 | 124 | 63.2 | 6.9 | 6 | 378 |
| D87130 | 62.8 | 47.3 | 77 | 0 | 16.2 | 121 | 63.2 | 6.9 | 5.5 | 389 |
| 1 D87240 | 60.2 | 43.7 | 64 | 2 | 15.0 | 108 | 64.8 | 7.3 | 5 | 386 |
| 2 D87240 | 60.4 | 42.2 | 66 | 1 | 15.2 | 120 | 64.8 | 7.1 | 6 | 400 |
| D87240 | 60.3 | 43.0 | 65 | 2 | 15.1 | 114 | 64.8 | 7.2 | 5.5 | 393 |
| 1 D88303 | 62.8 | 47.8 | 75 | 1 | 15.3 | 118 | 65.7 | 7.1 | 5 | 400 |
| 2 D88303 | 62.8 | 46.7 | 73 | 1 | 16.5 | 130 | 64.2 | 6.9 | 7 | 400 |
| D88303 | 62.8 | 47.3 | 74 | 1 | 15.9 | 124 | 64.9 | 7.0 | 6.0 | 400 |
| 1 D89135 | 62.2 | 44.8 | 72 | 1 | 16.5 | 117 | 64.2 | 7.4 | 5 | 400 |
| 2 D89135 | 62.0 | 41.8 | 66 | 0 | 16.8 | 125 | 65.1 | 7.2 | 8 | 400 |
| D89135 | 62.1 | 43.3 | 69 | 1 | 16.7 | 121 | 64.6 | 7.3 | 6.5 | 400 |
| 1 D901313 | 61.7 | 42.9 | 54 | 2 | 15.9 | 123 | 65.1 | 6.9 | 5 | 400 |
| 2 D901313 | 62.6 | 44.4 | 61 | 1 | 15.9 | 132 | 66.0 | 6.8 | 2 | 400 |
| D901313 | 62.1 | 43.7 | 58 | 2 | 15.9 | 128 | 65.6 | 6.8 | 3.5 | 400 |
| 1 D901419 | 62.6 | 40.2 | 37 | 1 | 15.7 | 118 | 63.6 | 6.8 | 4 | 400 |
| 2 D901419 | 62.6 | 38.8 | 34 | 1 | 16.0 | 127 | 64.5 | 6.7 | 2 | 390 |
| D901419 | 62.6 | 39.5 | 36 | 1 | 15.8 | 123 | 64.0 | 6.7 | 3.0 | 395 |

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Table 4 (Cont.)

Williston, ND

Average of both Reps.

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 D901442 | 62.3 | 42.9 | 72 | 1 | 16.4 | 113 | 61.7 | 7.0 | 4 | 338 |
| 2 D901442 | 63.1 | 45.0 | 69 | 0 | 16.5 | 126 | 65.1 | 6.8 | 2 | 378 |
| D901442 | 62.7 | 44.0 | 71 | 1 | 16.5 | 120 | 63.4 | 6.9 | 3.0 | 358 |
| 1 D901486 | 60.6 | 41.7 | 57 | 1 | 16.0 | 115 | 62.6 | 7.1 | 3 | 385 |
| 2 D901486 | 60.7 | 42.2 | 61 | 0 | 16.1 | 113 | 62.3 | 7.0 | 2 | 396 |
| D901486 | 60.6 | 42.0 | 59 | 1 | 16.1 | 114 | 62.4 | 7.1 | 2.5 | 391 |
| 1 D901518 | 61.6 | 42.0 | 58 | 1 | 15.5 | 114 | 64.2 | 7.2 | 3 | 383 |
| 2 D901518 | 61.8 | 42.7 | 54 | 1 | 16.1 | 115 | 62.9 | 7.1 | 3 | 394 |
| D901518 | 61.7 | 42.4 | 56 | 1 | 15.8 | 115 | 63.5 | 7.2 | 3.0 | 389 |
| 1 D901536 | 62.8 | 46.1 | 73 | 1 | 16.2 | 120 | 66.4 | 7.0 | 2 | 400 |
| 2 D901536 | 62.6 | 42.7 | 65 | 0 | 15.6 | 123 | 64.8 | 6.9 | 2 | 400 |
| D901536 | 62.7 | 44.4 | 69 | 1 | 15.9 | 122 | 65.6 | 6.9 | 2.0 | 400 |
| 1 D901786 | 62.4 | 40.0 | 44 | 3 | 15.3 | 114 | 63.2 | 6.9 | 2 | 369 |
| 2 D901786 | 62.7 | 41.5 | 52 | 2 | 16.5 | 120 | 64.2 | 6.8 | 2 | 393 |
| D901786 | 62.6 | 40.8 | 48 | 3 | 15.9 | 117 | 63.7 | 6.8 | 2.0 | 381 |
| 1 D901155 | 62.6 | 42.0 | 72 | 0 | 17.4 | 119 | 63.2 | 7.0 | 3 | 400 |
| 2 D901155 | 63.0 | 44.6 | 72 | 0 | 14.9 | 121 | 62.3 | 7.0 | 2 | 400 |
| D901155 | 62.8 | 43.3 | 72 | 0 | 16.1 | 120 | 62.7 | 7.0 | 2.5 | 400 |
| 1 D91058 | 60.2 | 40.7 | 65 | 2 | 15.9 | 110 | 63.6 | 7.3 | 3 | 358 |
| 2 D91058 | 61.0 | 42.4 | 73 | 1 | 16.8 | 122 | 64.2 | 7.2 | 3 | 383 |
| D91058 | 60.6 | 41.6 | 69 | 2 | 16.3 | 116 | 63.9 | 7.3 | 3.0 | 371 |
| 1 D91066 | 60.6 | 41.7 | 64 | 1 | 16.9 | 115 | 65.1 | 7.2 | 3 | 370 |
| 2 D91066 | 60.8 | 41.8 | 67 | 1 | 16.4 | 124 | 63.2 | 7.2 | 3 | 370 |
| D91066 | 60.7 | 41.8 | 66 | 1 | 16.6 | 120 | 64.2 | 7.2 | 3.0 | 370 |
| 1 D91103 | 61.8 | 44.1 | 78 | 0 | 17.0 | 112 | 62.6 | 7.1 | 4 | 363 |
| 2 D91103 | 62.2 | 44.8 | 82 | 0 | 17.1 | 124 | 65.1 | 7.1 | 3 | 361 |
| D91103 | 62.0 | 44.5 | 80 | 0 | 17.0 | 118 | 63.9 | 7.1 | 3.5 | 362 |
| 1 D91180 | 61.4 | 42.4 | 54 | 3 | 15.5 | 104 | 64.8 | 7.1 | 3 | 371 |
| 2 D91180 | 62.6 | 42.0 | 61 | 2 | 16.9 | 118 | 64.5 | 7.0 | 3 | 394 |
| D91180 | 62.0 | 42.2 | 58 | 3 | 16.2 | 111 | 64.6 | 7.1 | 3.0 | 383 |
| 1 D91309 | 61.8 | 42.2 | 63 | 1 | 16.6 | 121 | 63.2 | 7.1 | 3 | 375 |
| 2 D91309 | 62.2 | 42.4 | 67 | 1 | 15.9 | 127 | 63.2 | 7.2 | 3 | 400 |
| D91309 | 62.0 | 42.3 | 65 | 1 | 16.2 | 124 | 63.2 | 7.2 | 3.0 | 388 |
| 1 D91321 | 62.2 | 43.5 | 59 | 1 | 14.6 | 114 | 64.5 | 7.3 | 4 | 400 |
| 2 D91321 | 61.6 | 42.2 | 50 | 2 | 15.2 | 126 | 64.2 | 7.2 | 3 | 400 |
| D91321 | 61.9 | 42.9 | 55 | 2 | 14.9 | 120 | 64.3 | 7.2 | 3.5 | 400 |
| 1 D91306 | 61.0 | 43.3 | 64 | 1 | 15.9 | 123 | 59.8 | 7.1 | 4 | 345 |
| 2 D91306 | 61.9 | 45.2 | 72 | 0 | 16.4 | 120 | 60.4 | 6.9 | 3 | 345 |
| D91306 | 61.5 | 44.3 | 68 | 1 | 16.1 | 122 | 60.1 | 7.0 | 3.5 | 345 |
| 1 D91076 | 61.4 | 40.5 | 50 | 2 | 15.5 | 115 | 62.6 | 7.4 | 3 | 394 |
| 2 D91076 | 61.8 | 42.2 | 53 | 1 | 15.7 | 120 | 63.2 | 7.2 | 3 | 400 |
| D91076 | 61.6 | 41.4 | 52 | 2 | 15.6 | 118 | 62.9 | 7.3 | 3.0 | 397 |
| 1 D91080 | 62.5 | 43.9 | 65 | 1 | 15.6 | 119 | 65.7 | 7.2 | 4 | 400 |
| 2 D91080 | 62.1 | 42.4 | 65 | 1 | 15.4 | 119 | 65.1 | 7.0 | 3 | 400 |
| D91080 | 62.3 | 43.2 | 65 | 1 | 15.5 | 119 | 65.4 | 7.1 | 3.5 | 400 |
| 1 D91410 | 59.4 | 34.2 | 13 | 6 | 14.5 | 112 | 63.2 | 7.3 | 4 | 400 |
| 2 D91410 | 59.8 | 36.9 | 22 | 4 | 14.7 | 114 | 62.1 | 7.1 | 3 | 400 |
| D91410 | 59.6 | 35.6 | 18 | 5 | 14.6 | 113 | 62.7 | 7.2 | 3.5 | 400 |

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Table 5

Crookston, Minn.

Average of both Reps.

Fargo, ND

| VARIETY | Rep. # | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|-----------------|--------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| 1 Mindum | | 54.6 | 29.0 | 37 | 7 | 14.0 | 91 | 59.3 | 6.3 | 1 | 278 |
| 2 Mindum | | 53.8 | 31.8 | 37 | 7 | 13.7 | 90 | 60.6 | 6.1 | 1 | 261 |
| Mindum | | 54.2 | 30.4 | 37 | 7 | 13.8 | 91 | 59.9 | 6.2 | 1.0 | 270 |
| 1 Munich | | 55.8 | 30.4 | 40 | 5 | 14.3 | 99 | 61.1 | 6.7 | 0 | 321 |
| 2 Munich | | 55.0 | 34.0 | 39 | 4 | 14.0 | 96 | 63.9 | 6.5 | 3 | 341 |
| Munich | | 55.4 | 32.2 | 40 | 5 | 14.2 | 98 | 62.5 | 6.6 | 1.5 | 331 |
| 1 Ward | | 54.0 | 31.2 | 32 | 7 | 14.8 | 99 | 59.3 | 6.7 | 0 | 290 |
| 2 Ward | | 54.3 | 30.1 | 32 | 6 | 15.1 | 107 | 61.1 | 6.6 | 1 | 281 |
| Ward | | 54.2 | 30.7 | 32 | 7 | 14.9 | 103 | 60.2 | 6.6 | 0.5 | 286 |
| 1 Rugby | | 56.1 | 33.8 | 50 | 2 | 14.3 | 96 | 63.0 | 6.7 | 2 | 288 |
| 2 Rugby | | 55.3 | 30.9 | 37 | 5 | 14.2 | 99 | 62.4 | 6.5 | 1 | 351 |
| Rugby | | 55.7 | 32.3 | 44 | 4 | 14.3 | 98 | 62.7 | 6.6 | 1.5 | 320 |
| 1 Vic | | 53.0 | 31.6 | 41 | 5 | 15.3 | 94 | 60.6 | 6.6 | 3 | 236 |
| 2 Vic | | 55.4 | 30.3 | 30 | 7 | 14.8 | 102 | 63.6 | 6.4 | 2 | 327 |
| Vic | | 54.2 | 31.0 | 36 | 6 | 15.1 | 98 | 62.1 | 6.5 | 2.5 | 282 |
| 1 Lloyd | | 51.5 | 26.6 | 25 | 8 | 14.4 | 87 | 59.8 | 6.1 | 2 | 320 |
| 2 Lloyd | | 53.5 | 27.5 | 32 | 6 | 15.4 | 100 | 60.2 | 6.4 | 2 | 250 |
| Lloyd | | 52.5 | 27.1 | 29 | 7 | 14.9 | 94 | 60.0 | 6.3 | 2.0 | 285 |
| 1 Monroe | | 56.1 | 34.0 | 49 | 3 | 14.8 | 102 | 62.0 | 6.7 | 4 | 355 |
| 2 Monroe | | 55.3 | 34.7 | 34 | 4 | 14.4 | 97 | 62.0 | 6.6 | 3 | 355 |
| Monroe | | 55.7 | 34.4 | 42 | 4 | 14.6 | 100 | 62.0 | 6.7 | 3.5 | 355 |
| 1 Renville | | 55.0 | 29.7 | 33 | 7 | 15.3 | 103 | 61.5 | 6.6 | 3 | 276 |
| 2 Renville | | 53.0 | 32.3 | 44 | 4 | 15.5 | 103 | 60.2 | 6.5 | 5 | 291 |
| Renville | | 54.0 | 31.0 | 39 | 6 | 15.4 | 103 | 60.8 | 6.5 | 4.0 | 284 |
| 1 Medora | | 55.0 | 30.9 | 41 | 4 | 15.3 | 104 | 60.6 | 6.7 | 3 | 281 |
| 2 Medora | | 54.1 | 32.2 | 39 | 4 | 15.2 | 107 | 59.6 | 6.6 | 5 | 333 |
| Medora | | 54.5 | 31.6 | 40 | 4 | 15.2 | 106 | 60.1 | 6.6 | 4.0 | 307 |
| 1 Sceptre | | 55.0 | 31.1 | 41 | 4 | 14.4 | 98 | 61.5 | 6.6 | 2 | 329 |
| 2 Sceptre | | 55.0 | 30.1 | 39 | 5 | 14.2 | 96 | 62.4 | 6.5 | 4 | 339 |
| Sceptre | | 55.0 | 30.6 | 40 | 5 | 14.3 | 97 | 61.9 | 6.5 | 3.0 | 334 |
| 1 D87130 | | 55.9 | 34.1 | 54 | 3 | 14.8 | 97 | 62.4 | 6.5 | 2 | 318 |
| 2 D87130 | | 54.9 | 31.3 | 39 | 4 | 14.9 | 99 | 62.0 | 6.3 | 4 | 337 |
| D87130 | | 55.4 | 32.7 | 47 | 4 | 14.9 | 98 | 62.2 | 6.4 | 3.0 | 328 |
| 1 D87240 | | 53.8 | 36.1 | 62 | 2 | 14.5 | 100 | 61.1 | 6.6 | 2 | 276 |
| 2 D87240 | | 52.3 | 33.2 | 49 | 3 | 14.6 | 102 | 58.7 | 6.6 | 4 | 331 |
| D87240 | | 53.1 | 34.7 | 56 | 3 | 14.6 | 101 | 59.9 | 6.6 | 3.0 | 304 |
| 1 D88303 | | 52.4 | 26.7 | 25 | 9 | 14.0 | 85 | 59.8 | 6.6 | 3 | 277 |
| 2 D88303 | | 54.1 | 30.8 | 38 | 5 | 14.4 | 102 | 61.5 | 6.5 | 3 | 237 |
| D88303 | | 53.2 | 28.8 | 32 | 7 | 14.2 | 94 | 60.6 | 6.6 | 3.0 | 257 |
| 1 D89135 | | 54.1 | 35.7 | 53 | 3 | 16.0 | 107 | 61.1 | 6.6 | 3 | 268 |
| 2 D89135 | | 54.9 | 32.1 | 47 | 3 | 16.0 | 104 | 61.1 | 6.6 | 3 | 250 |
| D89135 | | 54.5 | 33.9 | 50 | 3 | 16.0 | 106 | 61.1 | 6.6 | 3.0 | 259 |
| 1 D901313 | | 54.4 | 34.7 | 59 | 3 | 15.5 | 102 | 62.3 | 6.7 | 2 | 263 |
| 2 D901313 | | 54.3 | 30.8 | 38 | 6 | 14.8 | 101 | 59.6 | 6.4 | 2 | 297 |
| D901313 | | 54.4 | 32.8 | 49 | 5 | 15.1 | 102 | 60.9 | 6.5 | 2.0 | 280 |
| 1 D901419 | | 55.8 | 31.8 | 29 | 6 | 15.3 | 105 | 60.2 | 6.2 | 2 | 308 |
| 2 D901419 | | 55.8 | 31.8 | 25 | 6 | 15.1 | 105 | 59.3 | 6.1 | 2 | 309 |
| D901419 | | 55.8 | 31.8 | 27 | 6 | 15.2 | 105 | 59.7 | 6.2 | 2.0 | 309 |

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Table 5 (Cont.)

Crookston, Minn. Average of both Reps.

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 D901442 | 56.2 | 36.6 | 60 | 2 | 15.3 | 104 | 61.5 | 6.4 | 2 | 313 |
| 2 D901442 | 55.7 | 34.0 | 44 | 3 | 15.0 | 103 | 61.5 | 6.3 | 2 | 308 |
| D901442 | 56.0 | 35.3 | 52 | 3 | 15.2 | 104 | 61.5 | 6.4 | 2.0 | 311 |
| 1 D901486 | 53.6 | 34.8 | 51 | 4 | 14.4 | 96 | 61.1 | 6.6 | 2 | 327 |
| 2 D901486 | 53.6 | 34.0 | 48 | 4 | 14.6 | 97 | 61.1 | 6.4 | 2 | 311 |
| D901486 | 53.6 | 34.4 | 50 | 4 | 14.5 | 97 | 61.1 | 6.5 | 2.0 | 319 |
| 1 D901518 | 54.0 | 31.8 | 44 | 5 | 14.3 | 98 | 58.9 | 6.6 | 2 | 328 |
| 2 D901518 | 54.5 | 30.3 | 41 | 5 | 14.1 | 90 | 62.3 | 6.5 | 2 | 305 |
| D901518 | 54.2 | 31.1 | 43 | 5 | 14.2 | 94 | 60.6 | 6.5 | 2.0 | 317 |
| 1 D901536 | 53.2 | 30.1 | 34 | 8 | 15.4 | 91 | 57.9 | 6.4 | 3 | 237 |
| 2 D901536 | 50.9 | 29.6 | 24 | 8 | 14.4 | 91 | 57.9 | 6.6 | 4 | 343 |
| D901536 | 52.0 | 29.9 | 29 | 8 | 14.9 | 91 | 57.9 | 6.5 | 3.5 | 290 |
| 1 D901786 | 53.8 | 28.6 | 22 | 9 | 13.9 | 88 | 60.2 | 6.4 | 3 | 362 |
| 2 D901786 | 53.6 | 28.4 | 19 | 9 | 14.1 | 95 | 59.3 | 6.4 | 2 | 365 |
| D901786 | 53.7 | 28.5 | 21 | 9 | 14.0 | 92 | 59.7 | 6.4 | 2.5 | 364 |
| 1 D901155 | 56.4 | 32.6 | 45 | 4 | 14.5 | 101 | 60.2 | 6.7 | 3 | 290 |
| 2 D901155 | 57.2 | 34.0 | 48 | 4 | 15.0 | 109 | 60.2 | 6.6 | 3 | 354 |
| D901155 | 56.8 | 33.3 | 47 | 4 | 14.8 | 105 | 60.2 | 6.6 | 3.0 | 322 |
| 1 D91058 | 53.5 | 29.2 | 36 | 7 | 14.7 | 100 | 60.7 | 6.4 | 2 | 296 |
| 2 D91058 | 52.9 | 32.6 | 55 | 3 | 15.7 | 101 | 60.6 | 6.6 | 2 | 250 |
| D91058 | 53.2 | 30.9 | 46 | 5 | 15.2 | 101 | 60.6 | 6.5 | 2.0 | 273 |
| 1 D91066 | 52.6 | 32.3 | 54 | 7 | 16.2 | 100 | 60.7 | 6.6 | 3 | 247 |
| 2 D91066 | 53.0 | 30.0 | 32 | 6 | 14.4 | 100 | 58.7 | 6.6 | 2 | 316 |
| D91066 | 52.8 | 31.2 | 43 | 7 | 15.3 | 100 | 59.7 | 6.6 | 2.5 | 282 |
| 1 D91103 | 54.5 | 35.2 | 60 | 2 | 16.0 | 106 | 59.8 | 6.5 | 2 | 189 |
| 2 D91103 | 54.9 | 35.0 | 57 | 2 | 15.7 | 103 | 59.6 | 6.4 | 2 | 253 |
| D91103 | 54.7 | 35.1 | 59 | 2 | 15.8 | 105 | 59.7 | 6.5 | 2.0 | 221 |
| 1 D91180 | 52.6 | 27.3 | 24 | 8 | 15.1 | 88 | 60.2 | 6.5 | 3 | 337 |
| 2 D91180 | 52.2 | 28.1 | 23 | 10 | 15.4 | 99 | 58.3 | 6.4 | 3 | 348 |
| D91180 | 52.4 | 27.7 | 24 | 9 | 15.2 | 94 | 59.3 | 6.5 | 3.0 | 343 |
| 1 D91309 | 54.2 | 30.7 | 40 | 6 | 14.4 | 94 | 61.1 | 6.6 | 3 | 333 |
| 2 D91309 | 54.0 | 33.9 | 46 | 3 | 14.6 | 102 | 61.5 | 6.7 | 2 | 296 |
| D91309 | 54.1 | 32.3 | 43 | 5 | 14.5 | 98 | 61.3 | 6.6 | 2.5 | 315 |
| 1 D91321 | 52.8 | 31.9 | 32 | 7 | 14.3 | 96 | 58.9 | 6.8 | 3 | 347 |
| 2 D91321 | 54.7 | 28.8 | 36 | 7 | 14.5 | 101 | 59.6 | 6.7 | 3 | 293 |
| D91321 | 53.8 | 30.4 | 34 | 7 | 14.4 | 99 | 59.3 | 6.7 | 3.0 | 320 |
| 1 D91306 | 54.2 | 32.6 | 46 | 5 | 14.1 | 92 | 60.6 | 6.6 | 2 | 291 |
| 2 D91306 | 54.2 | 32.3 | 41 | 6 | 14.3 | 101 | 59.6 | 6.6 | 2 | 330 |
| D91306 | 54.2 | 32.5 | 44 | 6 | 14.2 | 97 | 60.1 | 6.6 | 2.0 | 311 |
| 1 D91076 | 52.3 | 28.1 | 20 | 11 | 14.6 | 90 | 60.2 | 6.7 | 2 | 335 |
| 2 D91076 | 52.1 | 28.2 | 24 | 10 | 14.8 | 95 | 60.2 | 6.6 | 3 | 302 |
| D91076 | 52.2 | 28.2 | 22 | 11 | 14.7 | 93 | 60.2 | 6.6 | 2.5 | 319 |
| 1 D91080 | 54.0 | 31.5 | 39 | 5 | 14.1 | 94 | 60.2 | 6.6 | 1 | 319 |
| 2 D91080 | 53.4 | 32.3 | 55 | 4 | 16.0 | 103 | 60.2 | 6.5 | 3 | 285 |
| D91080 | 53.7 | 31.9 | 47 | 5 | 15.0 | 99 | 60.2 | 6.6 | 2.0 | 302 |
| 1 D91410 | 53.7 | 31.2 | 22 | 7 | 14.0 | 91 | 60.7 | 6.6 | 3 | 337 |
| 2 D91410 | 52.5 | 28.5 | 17 | 10 | 14.3 | 99 | 59.3 | 6.5 | 3 | 337 |
| D91410 | 53.1 | 29.9 | 20 | 9 | 14.1 | 95 | 60.0 | 6.5 | 3.0 | 337 |

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Table 6

Morris, Minn.

Average of both Reps.

Fargo, ND

| VARIETY | Rep. # | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|-----------------|--------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| 1 Mindum | | 56.1 | 32.7 | 36 | 5 | 13.8 | 82 | 64.5 | 6.1 | 1 | 242 |
| 2 Mindum | | 56.8 | 29.8 | 33 | 5 | 13.6 | 79 | 62.4 | 6.2 | 1 | 214 |
| Mindum | | 56.4 | 31.3 | 35 | 5 | 13.7 | 81 | 63.4 | 6.2 | 1.0 | 228 |
| 1 Munich | | 55.3 | 34.2 | 48 | 3 | 14.3 | 94 | 65.7 | 6.4 | 2 | 297 |
| 2 Munich | | 55.0 | 32.4 | 46 | 3 | 14.6 | 100 | 64.2 | 6.4 | 3 | 292 |
| Munich | | 55.1 | 33.3 | 47 | 3 | 14.5 | 97 | 65.0 | 6.4 | 2.5 | 295 |
| 1 Ward | | 56.1 | 32.4 | 31 | 4 | 14.6 | 101 | 64.8 | 6.4 | 1 | 292 |
| 2 Ward | | 54.7 | 30.6 | 25 | 6 | 15.0 | 104 | 61.8 | 6.4 | 1 | 300 |
| Ward | | 55.4 | 31.5 | 28 | 5 | 14.8 | 103 | 63.3 | 6.4 | 1.0 | 296 |
| 1 Rugby | | 55.0 | 30.5 | 25 | 5 | 14.4 | 104 | 62.4 | 6.5 | 1 | 328 |
| 2 Rugby | | 54.4 | 31.0 | 26 | 4 | 14.4 | 97 | 62.4 | 6.5 | 2 | 299 |
| Rugby | | 54.7 | 30.8 | 26 | 5 | 14.4 | 101 | 62.4 | 6.5 | 1.5 | 314 |
| 1 Vic | | 52.8 | 32.5 | 43 | 3 | 15.0 | 105 | 62.0 | 6.4 | 3 | 279 |
| 2 Vic | | 53.6 | 30.2 | 35 | 5 | 15.4 | 100 | 59.6 | 6.6 | 4 | 257 |
| Vic | | 53.2 | 31.4 | 39 | 4 | 15.2 | 103 | 60.8 | 6.5 | 3.5 | 268 |
| 1 Lloyd | | 51.4 | 31.2 | 39 | 4 | 14.0 | 82 | 63.3 | 6.2 | 2 | 243 |
| 2 Lloyd | | 50.8 | 30.5 | 33 | 5 | 14.8 | 91 | 61.1 | 6.4 | 4 | 240 |
| Lloyd | | 51.1 | 30.9 | 36 | 5 | 14.4 | 87 | 62.2 | 6.3 | 3.0 | 242 |
| 1 Monroe | | 53.8 | 33.6 | 51 | 2 | 14.4 | 98 | 63.3 | 6.4 | 2 | 291 |
| 2 Monroe | | 53.2 | 32.7 | 39 | 3 | 14.3 | 102 | 60.6 | 6.3 | 3 | 260 |
| Monroe | | 53.5 | 33.2 | 45 | 3 | 14.4 | 100 | 61.9 | 6.3 | 2.5 | 276 |
| 1 Renville | | 55.9 | 32.5 | 31 | 4 | 15.1 | 106 | 65.5 | 6.4 | 2 | 325 |
| 2 Renville | | 54.7 | 30.0 | 21 | 6 | 14.9 | 99 | 63.3 | 6.3 | 4 | 299 |
| Renville | | 55.3 | 31.3 | 26 | 5 | 15.0 | 103 | 64.4 | 6.4 | 3.0 | 312 |
| 1 Medora | | 54.2 | 31.3 | 39 | 4 | 15.1 | 100 | 61.5 | 6.3 | 2 | 271 |
| 2 Medora | | 55.1 | 31.7 | 38 | 3 | 15.0 | 102 | 61.5 | 6.4 | 4 | 290 |
| Medora | | 54.6 | 31.5 | 39 | 4 | 15.0 | 101 | 61.5 | 6.3 | 3.0 | 281 |
| 1 Sceptre | | 52.1 | 27.7 | 30 | 4 | 15.1 | 96 | 61.8 | 6.5 | 2 | 278 |
| 2 Sceptre | | 52.8 | 28.8 | 31 | 3 | 14.8 | 87 | 63.0 | 6.4 | 4 | 285 |
| Sceptre | | 52.4 | 28.3 | 31 | 4 | 14.9 | 92 | 62.4 | 6.4 | 3.0 | 282 |
| 1 D87130 | | 55.0 | 32.4 | 38 | 3 | 14.9 | 100 | 63.3 | 6.4 | 3 | 343 |
| 2 D87130 | | 54.2 | 34.6 | 42 | 6 | 14.7 | 97 | 61.5 | 6.3 | 4 | 330 |
| D87130 | | 54.6 | 33.5 | 40 | 5 | 14.8 | 99 | 62.4 | 6.4 | 3.5 | 337 |
| 1 D87240 | | 52.2 | 31.2 | 43 | 3 | 15.0 | 95 | 60.2 | 6.6 | 4 | 330 |
| 2 D87240 | | 52.8 | 32.9 | 37 | 3 | 14.8 | 101 | 57.8 | 6.6 | 4 | 332 |
| D87240 | | 52.5 | 32.1 | 40 | 3 | 14.9 | 98 | 59.0 | 6.6 | 4.0 | 331 |
| 1 D88303 | | 52.3 | 29.9 | 30 | 5 | 14.5 | 85 | 62.0 | 6.3 | 3 | 226 |
| 2 D88303 | | 53.2 | 27.4 | 18 | 7 | 14.9 | 94 | 58.7 | 6.4 | 4 | 235 |
| D88303 | | 52.8 | 28.7 | 24 | 6 | 14.7 | 90 | 60.4 | 6.3 | 3.5 | 231 |
| 1 D89135 | | 52.2 | 30.2 | 31 | 4 | 15.5 | 96 | 61.1 | 6.5 | 4 | 237 |
| 2 D89135 | | 51.4 | 29.2 | 24 | 4 | 15.5 | 93 | 60.2 | 6.5 | 4 | 245 |
| D89135 | | 51.8 | 29.7 | 28 | 4 | 15.5 | 95 | 60.6 | 6.5 | 4.0 | 241 |
| 1 D901313 | | 54.4 | 32.1 | 31 | 5 | 14.2 | 98 | 64.8 | 6.3 | 6 | 254 |
| 2 D901313 | | 54.2 | 30.3 | 34 | 4 | 14.5 | 95 | 62.4 | 6.4 | 3 | 309 |
| D901313 | | 54.3 | 31.2 | 33 | 5 | 14.4 | 97 | 63.6 | 6.3 | 4.5 | 282 |
| 1 D901419 | | 55.5 | 29.7 | 16 | 7 | 15.2 | 107 | 62.4 | 6.2 | 5 | 347 |
| 2 D901419 | | 55.2 | 30.1 | 24 | 5 | 15.2 | 95 | 60.2 | 6.2 | 3 | 311 |
| D901419 | | 55.4 | 29.9 | 20 | 6 | 15.2 | 101 | 61.3 | 6.2 | 4.0 | 329 |

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Table 6 (Cont.)

| <i>Morris, Minn.</i> | | Average of both Reps. | | | | Fargo, ND | | | | |
|----------------------|-------------|-----------------------|-----------|-----------|-------------|------------|-------------|------------|------------|------------|
| VARIETY | TW | KWT | LG | SM | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
| Rep. # | (lb/bu) | (grams) | (%) | (%) | PRO | HARD- | EXT | COLOR | PAT | NUMBER |
| | | | | | (14% mb) | NESS | (%) | | | (Sec) |
| 1 D901442 | 56.5 | 34.7 | 46 | 2 | 14.4 | 95 | 63.9 | 6.3 | 4 | 343 |
| 2 D901442 | 55.8 | 32.6 | 43 | 3 | 14.6 | 97 | 63.6 | 6.2 | 3 | 293 |
| D901442 | 56.1 | 33.7 | 45 | 3 | 14.5 | 96 | 63.7 | 6.2 | 3.5 | 318 |
| 1 D901486 | 53.8 | 33.8 | 47 | 3 | 14.6 | 95 | 63.0 | 6.4 | 3 | 282 |
| 2 D901486 | 52.3 | 29.8 | 43 | 3 | 14.9 | 86 | 61.1 | 6.4 | 4 | 261 |
| D901486 | 53.0 | 31.8 | 45 | 3 | 14.7 | 91 | 62.0 | 6.4 | 3.5 | 272 |
| 1 D901518 | 54.3 | 32.4 | 39 | 5 | 14.0 | 91 | 62.0 | 6.4 | 3 | 314 |
| 2 D901518 | 52.9 | 28.1 | 27 | 6 | 13.9 | 87 | 60.2 | 6.4 | 3 | 301 |
| D901518 | 53.6 | 30.3 | 33 | 6 | 13.9 | 89 | 61.1 | 6.4 | 3.0 | 308 |
| 1 D901536 | 53.8 | 29.2 | 29 | 6 | 14.9 | 89 | 63.0 | 6.3 | 2 | 260 |
| 2 D901536 | 51.4 | 27.2 | 43 | 7 | 15.0 | 86 | 61.7 | 6.3 | 4 | 253 |
| D901536 | 52.6 | 28.2 | 36 | 7 | 14.9 | 88 | 62.3 | 6.3 | 3.0 | 257 |
| 1 D901786 | 52.6 | 32.1 | 37 | 5 | 14.7 | 101 | 63.0 | 6.3 | 2 | 239 |
| 2 D901786 | 52.6 | 26.8 | 17 | 7 | 14.2 | 90 | 60.6 | 6.2 | 4 | 328 |
| D901786 | 52.6 | 29.5 | 27 | 6 | 14.4 | 96 | 61.8 | 6.2 | 3.0 | 284 |
| 1 D901155 | 56.8 | 32.6 | 39 | 4 | 14.6 | 98 | 61.1 | 6.6 | 2 | 251 |
| 2 D901155 | 56.2 | 32.5 | 44 | 2 | 15.0 | 106 | 58.7 | 6.5 | 4 | 291 |
| D901155 | 56.5 | 32.6 | 42 | 3 | 14.8 | 102 | 59.9 | 6.6 | 3.0 | 271 |
| 1 D91058 | 54.8 | 34.8 | 59 | 2 | 15.1 | 106 | 63.9 | 6.5 | 3 | 326 |
| 2 D91058 | 52.9 | 30.2 | 41 | 3 | 15.7 | 98 | 61.5 | 6.6 | 5 | 301 |
| D91058 | 53.8 | 32.5 | 50 | 3 | 15.4 | 102 | 62.7 | 6.6 | 4.0 | 314 |
| 1 D91066 | 54.7 | 33.6 | 58 | 2 | 15.5 | 97 | 63.3 | 6.5 | 3 | 301 |
| 2 D91066 | 53.3 | 33.0 | 54 | 2 | 15.4 | 88 | 62.0 | 6.5 | 4 | 270 |
| D91066 | 54.0 | 33.3 | 56 | 2 | 15.5 | 93 | 62.7 | 6.5 | 3.5 | 286 |
| 1 D91103 | 54.6 | 32.2 | 49 | 1 | 14.3 | 88 | 63.0 | 6.4 | 3 | 261 |
| 2 D91103 | 53.0 | 31.1 | 53 | 1 | 14.5 | 87 | 61.5 | 6.3 | 3 | 243 |
| D91103 | 53.8 | 31.7 | 51 | 1 | 14.4 | 88 | 62.2 | 6.4 | 3.0 | 252 |
| 1 D91180 | 52.2 | 27.5 | 18 | 8 | 16.4 | 94 | 60.7 | 6.5 | 6 | 310 |
| 2 D91180 | 54.7 | 31.2 | 26 | 5 | 14.9 | 97 | 62.0 | 6.4 | 4 | 289 |
| D91180 | 53.4 | 29.4 | 22 | 7 | 15.6 | 96 | 61.4 | 6.4 | 5.0 | 300 |
| 1 D91309 | 54.8 | 33.3 | 40 | 3 | 14.5 | 93 | 64.8 | 6.4 | 4 | 257 |
| 2 D91309 | 54.0 | 31.7 | 43 | 3 | 14.7 | 89 | 61.5 | 6.5 | 4 | 254 |
| D91309 | 54.4 | 32.5 | 42 | 3 | 14.6 | 91 | 63.1 | 6.4 | 4.0 | 256 |
| 1 D91321 | 53.8 | 30.6 | 34 | 4 | 14.4 | 94 | 59.3 | 6.5 | 4 | 278 |
| 2 D91321 | 55.5 | 33.4 | 33 | 5 | 13.9 | 102 | 60.2 | 6.6 | 4 | 333 |
| D91321 | 54.7 | 32.0 | 34 | 5 | 14.1 | 98 | 59.7 | 6.6 | 4.0 | 306 |
| 1 D91306 | 54.5 | 33.0 | 55 | 2 | 14.6 | 100 | 62.0 | 6.4 | 3 | 268 |
| 2 D91306 | 53.5 | 31.6 | 42 | 4 | 14.4 | 93 | 61.7 | 6.5 | 4 | 300 |
| D91306 | 54.0 | 32.3 | 49 | 3 | 14.5 | 97 | 61.9 | 6.5 | 3.5 | 284 |
| 1 D91076 | 52.8 | 28.7 | 30 | 5 | 14.1 | 77 | 63.6 | 6.4 | 3 | 224 |
| 2 D91076 | 50.6 | 26.2 | 20 | 8 | 14.7 | 75 | 61.7 | 6.4 | 3 | 232 |
| D91076 | 51.7 | 27.5 | 25 | 7 | 14.4 | 76 | 62.6 | 6.4 | 3.0 | 228 |
| 1 D91080 | 51.8 | 27.0 | 26 | 6 | 14.7 | 81 | 61.1 | 6.2 | 4 | 235 |
| 2 D91080 | 53.2 | 31.6 | 37 | 4 | 13.9 | 83 | 62.0 | 6.5 | 3 | 263 |
| D91080 | 52.5 | 29.3 | 32 | 5 | 14.3 | 82 | 61.6 | 6.3 | 3.5 | 249 |
| 1 D91410 | 51.8 | 24.6 | 12 | 9 | 15.1 | 91 | 60.7 | 6.4 | 5 | 308 |
| 2 D91410 | 50.8 | 24.3 | 7 | 13 | 15.0 | 90 | 59.3 | 6.3 | 6 | 320 |
| D91410 | 51.3 | 24.5 | 10 | 11 | 15.1 | 91 | 60.0 | 6.3 | 5.5 | 314 |

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Table 7

Swift Current, Sask Average of both Reps.

Fargo, ND

| VARIETY | Rep. # | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|-----------------|--------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| 1 Mindum | | 62.2 | 36.6 | 33 | 4 | 11.1 | 95 | 63.3 | 6.5 | 3 | 400 |
| 2 Mindum | | 60.9 | 32.3 | 22 | 5 | 10.5 | 90 | 66.4 | 6.5 | 1 | 400 |
| Mindum | | 61.5 | 34.5 | 28 | 5 | 10.8 | 93 | 64.8 | 6.5 | 2.0 | 400 |
| 1 Munich | | 61.0 | 38.9 | 49 | 2 | 9.7 | 83 | 65.1 | 6.9 | 2 | 376 |
| 2 Munich | | 61.0 | 39.4 | 54 | 1 | 9.4 | 79 | 66.4 | 7.0 | 2 | 381 |
| Munich | | 61.0 | 39.2 | 52 | 2 | 9.6 | 81 | 65.8 | 6.9 | 2.0 | 379 |
| 1 Ward | | 61.8 | 39.2 | 49 | 1 | 9.8 | 85 | 64.8 | 6.9 | 0 | 355 |
| 2 Ward | | 60.8 | 38.5 | 55 | 1 | 9.0 | 76 | 67.0 | 6.7 | 0 | 345 |
| Ward | | 61.3 | 38.9 | 52 | 1 | 9.4 | 81 | 65.9 | 6.8 | 0.0 | 350 |
| 1 Rugby | | 60.8 | 37.5 | 42 | 3 | 10.5 | 91 | 64.8 | 6.9 | 0 | 370 |
| 2 Rugby | | 61.2 | 37.6 | 40 | 3 | 10.9 | 104 | 65.1 | 7.1 | 0 | 381 |
| Rugby | | 61.0 | 37.6 | 41 | 3 | 10.7 | 98 | 65.0 | 7.0 | 0.0 | 376 |
| 1 Vic | | 61.0 | 42.2 | 58 | 1 | 9.2 | 82 | 65.1 | 6.9 | 2 | 381 |
| 2 Vic | | 62.6 | 41.0 | 53 | 2 | 11.0 | 99 | 66.1 | 7.1 | 3 | 386 |
| Vic | | 61.8 | 41.6 | 56 | 2 | 10.1 | 91 | 65.6 | 7.0 | 2.5 | 384 |
| 1 Lloyd | | 59.5 | 40.7 | 53 | 2 | 8.6 | 77 | 63.9 | 6.8 | 1 | 398 |
| 2 Lloyd | | 60.3 | 40.2 | 49 | 2 | 8.7 | 83 | 64.8 | 7.0 | 1 | 400 |
| Lloyd | | 59.9 | 40.5 | 51 | 2 | 8.6 | 80 | 64.4 | 6.9 | 1.0 | 399 |
| 1 Monroe | | 60.7 | 42.7 | 61 | 1 | 10.0 | 89 | 65.7 | 6.8 | 2 | 371 |
| 2 Monroe | | 60.4 | 41.8 | 52 | 1 | 10.1 | 95 | 65.7 | 7.0 | 4 | 376 |
| Monroe | | 60.6 | 42.3 | 57 | 1 | 10.0 | 92 | 65.7 | 6.9 | 3.0 | 374 |
| 1 Renville | | 59.9 | 34.5 | 24 | 5 | 9.6 | 83 | 65.7 | 6.8 | 2 | 400 |
| 2 Renville | | 59.9 | 33.8 | 24 | 5 | 10.2 | 96 | 65.7 | 7.0 | 4 | 376 |
| Renville | | 59.9 | 34.2 | 24 | 5 | 9.9 | 90 | 65.7 | 6.9 | 3.0 | 388 |
| 1 Medora | | 62.1 | 42.6 | 62 | 1 | 11.8 | 111 | 63.3 | 7.0 | 3 | 400 |
| 2 Medora | | 62.0 | 41.2 | 60 | 1 | 10.2 | 104 | 64.8 | 7.2 | 3 | 400 |
| Medora | | 62.0 | 41.9 | 61 | 1 | 11.0 | 108 | 64.1 | 7.1 | 3.0 | 400 |
| 1 Sceptre | | 59.6 | 35.7 | 36 | 3 | 10.3 | 98 | 62.0 | 6.8 | 3 | 382 |
| 2 Sceptre | | 60.2 | 37.5 | 44 | 2 | 10.8 | 102 | 64.8 | 6.7 | 3 | 385 |
| Sceptre | | 59.9 | 36.6 | 40 | 3 | 10.6 | 100 | 63.4 | 6.8 | 3.0 | 384 |
| 1 D87130 | | 62.2 | 45.2 | 74 | 1 | 10.6 | 97 | 64.2 | 6.8 | 3 | 382 |
| 2 D87130 | | 61.4 | 44.6 | 68 | 1 | 9.3 | 84 | 65.1 | 6.8 | 2 | 362 |
| D87130 | | 61.8 | 44.9 | 71 | 1 | 10.0 | 91 | 64.7 | 6.8 | 2.5 | 372 |
| 1 D87240 | | 59.4 | 40.8 | 56 | 1 | 9.3 | 87 | 63.6 | 7.0 | 2 | 387 |
| 2 D87240 | | 59.1 | 42.2 | 60 | 1 | 8.3 | 63 | 63.9 | 7.0 | 1 | 373 |
| D87240 | | 59.2 | 41.5 | 58 | 1 | 8.8 | 75 | 63.7 | 7.0 | 1.5 | 380 |
| 1 D88303 | | 60.2 | 36.0 | 24 | 5 | 10.3 | 95 | 63.3 | 6.9 | 3 | 385 |
| 2 D88303 | | 60.8 | 36.0 | 34 | 3 | 9.6 | 93 | 65.1 | 7.1 | 3 | 362 |
| D88303 | | 60.5 | 36.0 | 29 | 4 | 9.9 | 94 | 64.2 | 7.0 | 3.0 | 374 |
| 1 D89135 | | 62.0 | 40.5 | 59 | 1 | 10.7 | 93 | 66.1 | 7.3 | 4 | 400 |
| 2 D89135 | | 61.4 | 38.5 | 49 | 2 | 9.0 | 76 | 65.7 | 7.2 | 2 | 398 |
| D89135 | | 61.7 | 39.5 | 54 | 2 | 9.9 | 85 | 65.9 | 7.2 | 3.0 | 399 |
| 1 D901313 | | 60.0 | 34.2 | 38 | 2 | 9.8 | 94 | 64.5 | 6.6 | 2 | 400 |
| 2 D901313 | | 60.8 | 40.5 | 56 | 1 | 8.0 | 70 | 66.7 | 6.5 | 1 | 368 |
| D901313 | | 60.4 | 37.4 | 47 | 2 | 8.9 | 82 | 65.6 | 6.6 | 1.5 | 384 |
| 1 D901419 | | 61.6 | 34.8 | 22 | 4 | 9.9 | 88 | 62.0 | 6.6 | 2 | 397 |
| 2 D901419 | | 61.6 | 36.9 | 22 | 4 | 9.8 | 99 | 63.9 | 6.7 | 2 | 400 |
| D901419 | | 61.6 | 35.8 | 22 | 4 | 9.8 | 94 | 63.0 | 6.7 | 2.0 | 399 |

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Table 7 (Cont.)

Fargo, ND

Swift Current, Sask Average of both Reps.

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------------|---------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|------------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Rep. # | | | | | | | | | | |
| 1 D901442 | 62.1 | 39.4 | 54 | 1 | 9.7 | 89 | 63.9 | 6.8 | 2 | 392 |
| 2 D901442 | 61.8 | 39.8 | 61 | 1 | 8.4 | 73 | 65.7 | 6.8 | 1 | 373 |
| D901442 | 62.0 | 39.6 | 58 | 1 | 9.1 | 81 | 64.8 | 6.8 | 1.5 | 383 |
| 1 D901486 | 59.4 | 36.4 | 44 | 4 | 10.1 | 91 | 34.5 | 6.9 | 2 | 398 |
| 2 D901486 | 59.4 | 37.7 | 52 | 3 | 8.8 | 72 | 63.9 | 6.8 | 2 | 372 |
| D901486 | 59.4 | 37.1 | 48 | 4 | 9.4 | 82 | 49.2 | 6.9 | 2.0 | 385 |
| 1 D901518 | 59.4 | 36.8 | 38 | 3 | 9.4 | 81 | 61.1 | 6.8 | 2 | 380 |
| 2 D901518 | 59.7 | 41.3 | 63 | 1 | 8.9 | 77 | 64.2 | 6.7 | 3 | 370 |
| D901518 | 59.5 | 39.1 | 51 | 2 | 9.2 | 79 | 62.7 | 6.8 | 2.5 | 375 |
| 1 D901536 | 62.2 | 36.4 | 43 | 4 | 10.0 | 87 | 66.1 | 7.0 | 2 | 394 |
| 2 D901536 | 61.6 | 37.2 | 42 | 3 | 8.7 | 72 | 66.7 | 6.9 | 0 | 374 |
| D901536 | 61.9 | 36.8 | 43 | 4 | 9.3 | 80 | 66.4 | 7.0 | 1.0 | 384 |
| 1 D901786 | 60.9 | 33.0 | 18 | 6 | 9.0 | 88 | 61.5 | 6.7 | 2 | 388 |
| 2 D901786 | 61.2 | 34.1 | 15 | 6 | 9.5 | 95 | 61.5 | 6.9 | 2 | 373 |
| D901786 | 61.0 | 33.6 | 17 | 6 | 9.3 | 92 | 61.5 | 6.8 | 2.0 | 381 |
| 1 D901155 | 61.2 | 33.7 | 24 | 3 | 10.2 | 93 | 61.1 | 7.0 | 2 | 400 |
| 2 D901155 | 61.6 | 36.8 | 39 | 2 | 9.9 | 87 | 63.3 | 7.1 | 2 | 397 |
| D901155 | 61.4 | 35.3 | 32 | 3 | 10.1 | 90 | 62.2 | 7.0 | 2.0 | 399 |
| 1 D91058 | 61.6 | 38.8 | 58 | 2 | 9.3 | 89 | 63.9 | 7.0 | 2 | 396 |
| 2 D91058 | 60.9 | 40.7 | 59 | 2 | 8.8 | 80 | 64.8 | 7.1 | 1 | 379 |
| D91058 | 61.2 | 39.8 | 59 | 2 | 9.0 | 85 | 64.4 | 7.1 | 1.5 | 388 |
| 1 D91066 | 61.9 | 38.8 | 52 | 2 | 9.9 | 93 | 65.7 | 7.1 | 2 | 399 |
| 2 D91066 | 61.8 | 39.4 | 59 | 1 | 9.1 | 78 | 65.7 | 7.1 | 1 | 387 |
| D91066 | 61.9 | 39.1 | 56 | 2 | 9.5 | 86 | 65.7 | 7.1 | 1.5 | 393 |
| 1 D91103 | 63.1 | 39.1 | 51 | 1 | 9.0 | 69 | 64.2 | 6.9 | 1 | 374 |
| 2 D91103 | 63.3 | 37.5 | 34 | 2 | 9.5 | 81 | 65.7 | 7.0 | 1 | 371 |
| D91103 | 63.2 | 38.3 | 43 | 2 | 9.3 | 75 | 65.0 | 7.0 | 1.0 | 373 |
| 1 D91180 | 61.4 | 38.5 | 49 | 2 | 9.6 | 83 | 63.3 | 7.0 | 1 | 388 |
| 2 D91180 | 61.6 | 43.3 | 60 | 1 | 9.8 | 89 | 66.7 | 6.9 | 2 | 376 |
| D91180 | 61.5 | 40.9 | 55 | 2 | 9.7 | 86 | 65.0 | 6.9 | 1.5 | 382 |
| 1 D91309 | 60.2 | 40.8 | 48 | 2 | 10.9 | 101 | 62.4 | 7.1 | 2 | 364 |
| 2 D91309 | 60.3 | 43.7 | 62 | 1 | 8.6 | 72 | 66.7 | 6.9 | 1 | 357 |
| D91309 | 60.2 | 42.3 | 55 | 2 | 9.8 | 87 | 64.5 | 7.0 | 1.5 | 361 |
| 1 D91321 | 60.2 | 36.0 | 37 | 2 | 9.9 | 96 | 61.8 | 7.1 | 2 | 400 |
| 2 D91321 | 60.9 | 40.0 | 44 | 2 | 11.0 | 101 | 63.9 | 7.2 | 3 | 393 |
| D91321 | 60.6 | 38.0 | 41 | 2 | 10.4 | 99 | 62.9 | 7.1 | 2.5 | 397 |
| 1 D91306 | 59.1 | 33.7 | 35 | 5 | 9.3 | 83 | 61.1 | 7.0 | 1 | 394 |
| 2 D91306 | 59.7 | 36.2 | 34 | 6 | 8.7 | 67 | 63.0 | 7.0 | 1 | 369 |
| D91306 | 59.4 | 35.0 | 35 | 6 | 9.0 | 75 | 62.0 | 7.0 | 1.0 | 382 |
| 1 D91076 | 60.1 | 35.6 | 32 | 5 | 9.8 | 92 | 63.0 | 6.9 | 1 | 400 |
| 2 D91076 | 62.3 | 44.8 | 62 | 1 | 9.1 | 83 | 66.1 | 7.0 | 1 | 387 |
| D91076 | 61.2 | 40.2 | 47 | 3 | 9.4 | 88 | 64.5 | 7.0 | 1.0 | 394 |
| 1 D91080 | 60.6 | 39.1 | 50 | 2 | 9.0 | 81 | 61.5 | 6.9 | 0 | 361 |
| 2 D91080 | 60.8 | 42.9 | 62 | 1 | 7.8 | 67 | 64.8 | 6.9 | 0 | 368 |
| D91080 | 60.7 | 41.0 | 56 | 2 | 8.4 | 74 | 63.1 | 6.9 | 0.0 | 365 |
| 1 D91410 | 60.8 | 35.5 | 24 | 4 | 8.8 | 90 | 60.9 | 7.0 | 2 | 400 |
| 2 D91410 | 60.8 | 39.7 | 40 | 3 | 8.2 | 79 | 63.3 | 6.8 | 0 | 386 |
| D91410 | 60.8 | 37.6 | 32 | 4 | 8.5 | 85 | 62.1 | 6.9 | 1.0 | 393 |

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Table 8
Prosper, ND

Rep #: 1

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------|---------------|----------------|-----------|-----------|-----------------|---------------|------------|-------|------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Mindum | 56.6 | 34.6 | 22 | 8 | 14.7 | 97 | 60.9 | 6.4 | 1 | 142 |
| Munich | 51.8 | 30.6 | 21 | 8 | 15.1 | 93 | 60.0 | 6.7 | 1 | 170 |
| Ward | 51.0 | 27.5 | 11 | 13 | 15.7 | 102 | 57.8 | 6.6 | 1 | 105 |
| Rugby | 52.4 | 29.6 | 16 | 10 | 15.0 | 96 | 58.7 | 6.8 | 1 | 123 |
| Vic | 51.1 | 29.6 | 13 | 11 | 15.7 | 92 | 58.3 | 6.8 | 4 | 159 |
| Lloyd | 48.4 | 28.4 | 13 | 14 | 14.8 | 84 | 56.9 | 6.8 | 4 | 83 |
| Monroe | 49.9 | 25.8 | 13 | 13 | 15.9 | 94 | 57.3 | 6.8 | 5 | 202 |
| Renville | 52.0 | 27.1 | 9 | 16 | 16.0 | 97 | 58.7 | 6.7 | 4 | 113 |
| Medora | 49.9 | 26.7 | 14 | 11 | 15.8 | 94 | 57.4 | 6.9 | 5 | 141 |
| Sceptre | 49.6 | 27.5 | 18 | 12 | 15.5 | 94 | 56.9 | 6.6 | 5 | 125 |
| D87130 | 52.2 | 29.2 | 15 | 9 | 15.9 | 101 | 57.4 | 6.6 | 6 | 99 |
| D87240 | 52.1 | 30.9 | 37 | 4 | 15.6 | 108 | 59.6 | 6.7 | 6 | 150 |
| D88303 | 49.4 | 25.9 | 9 | 13 | 15.0 | 92 | 58.7 | 6.8 | 5 | 68 |
| D89135 | 50.5 | 27.0 | 16 | 10 | 16.7 | 102 | 56.0 | 6.9 | 6 | 89 |
| D901313 | 50.3 | 29.4 | 15 | 12 | 15.5 | 99 | 57.4 | 6.6 | 4 | 171 |
| D901419 | 51.1 | 25.3 | 7 | 14 | 16.1 | 99 | 55.0 | 6.4 | 4 | 206 |
| D901442 | 52.7 | 28.7 | 19 | 9 | 15.6 | 95 | 58.3 | 6.5 | 3 | 176 |
| D901486 | 49.4 | 29.8 | 23 | 7 | 15.0 | 95 | 59.3 | 6.8 | 3 | 190 |
| D901518 | 50.0 | 28.9 | 17 | 9 | 14.7 | 89 | 56.0 | 6.7 | 3 | 96 |
| D901536 | 47.1 | 21.1 | 5 | 20 | 16.1 | 93 | 51.4 | 6.7 | 3 | 113 |
| D901786 | 52.6 | 27.3 | 8 | 13 | 14.1 | 87 | 57.8 | 6.6 | 3 | 231 |
| D901155 | 55.1 | 32.3 | 23 | 7 | 15.3 | 102 | 57.8 | 6.9 | 4 | 201 |
| D91058 | 51.7 | 32.2 | 39 | 4 | 16.0 | 102 | 56.9 | 6.9 | 4 | 125 |
| D91066 | 49.8 | 26.9 | 25 | 10 | 16.6 | 90 | 54.1 | 6.8 | 4 | 74 |
| D91103 | 52.2 | 30.7 | 28 | 8 | 16.0 | 98 | 56.9 | 6.6 | 3 | 68 |
| D91180 | 50.2 | 27.0 | 9 | 12 | 16.6 | 92 | 56.0 | 6.7 | 3 | 112 |
| D91309 | 50.7 | 31.2 | 28 | 8 | 15.3 | 93 | 56.9 | 6.8 | 2 | 76 |
| D91321 | 52.8 | 31.5 | 24 | 7 | 15.0 | 98 | 57.8 | 6.9 | 4 | 163 |
| D91306 | 51.0 | 28.4 | 17 | 10 | 15.0 | 96 | 56.9 | 6.9 | 4 | 209 |
| D91076 | 47.5 | 21.4 | 3 | 34 | 15.8 | 91 | 53.2 | 7.0 | 3 | 138 |
| D91080 | 52.2 | 25.8 | 10 | 12 | 14.8 | 93 | 57.8 | 6.8 | 3 | 93 |
| D91410 | 51.0 | 24.2 | 6 | 22 | 15.9 | 97 | 54.1 | 6.7 | 3 | 205 |

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Table 9

Dickinson, ND

Rep #: 1

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------|---------------|----------------|-----------|-----------|-----------------|---------------|------------|-------|------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Mindum | 61.2 | 41.3 | 53 | 3 | 12.7 | 106 | 55.5 | 6.6 | 1 | 400 |
| Munich | 60.0 | 46.1 | 67 | 1 | 13.1 | 109 | 63.3 | 7.0 | 3 | 379 |
| Ward | 59.2 | 41.7 | 57 | 2 | 13.8 | 115 | 60.0 | 6.9 | 1 | 378 |
| Rugby | 59.7 | 43.7 | 60 | 3 | 14.4 | 120 | 59.6 | 7.0 | 1 | 384 |
| Vic | 58.6 | 43.9 | 57 | 3 | 14.2 | 113 | 59.6 | 7.0 | 2 | 331 |
| Lloyd | 57.0 | 42.0 | 37 | 4 | 13.0 | 110 | 58.7 | 7.0 | 2 | 334 |
| Monroe | 59.5 | 47.8 | 73 | 2 | 15.0 | 120 | 58.2 | 6.9 | 6 | 393 |
| Renville | 58.7 | 38.8 | 37 | 5 | 14.3 | 127 | 60.4 | 7.0 | 5 | 400 |
| Medora | 57.2 | 36.2 | 47 | 4 | 14.9 | 114 | 57.8 | 7.1 | 4 | 368 |
| Sceptre | 58.5 | 40.2 | 57 | 3 | 14.2 | 109 | 58.2 | 6.9 | 3 | 369 |
| D87130 | 60.7 | 50.8 | 75 | 1 | 13.8 | 106 | 59.5 | 6.8 | 3 | 400 |
| D87240 | 57.5 | 42.4 | 53 | 3 | 13.9 | 109 | 58.2 | 7.1 | 4 | 400 |
| D88303 | 60.1 | 46.3 | 63 | 2 | 14.0 | 112 | 57.8 | 6.9 | 5 | 316 |
| D89135 | 59.7 | 44.8 | 59 | 2 | 14.1 | 115 | 60.0 | 7.3 | 6 | 385 |
| D901313 | 58.7 | 41.5 | 43 | 3 | 13.2 | 108 | 59.5 | 6.8 | 3 | 400 |
| D901419 | 59.0 | 40.2 | 27 | 7 | 14.4 | 125 | 57.3 | 6.8 | 3 | 400 |
| D901442 | 59.8 | 41.7 | 53 | 3 | 13.7 | 105 | 59.1 | 6.9 | 3 | 396 |
| D901486 | 58.6 | 41.3 | 46 | 3 | 13.7 | 112 | 60.0 | 7.1 | 3 | 400 |
| D901518 | 58.2 | 43.9 | 48 | 4 | 13.5 | 107 | 57.7 | 6.9 | 3 | 400 |
| D901536 | 60.7 | 45.2 | 58 | 2 | 13.1 | 112 | 60.9 | 7.0 | 3 | 350 |
| D901786 | 59.3 | 39.4 | 49 | 4 | 13.7 | 113 | 57.3 | 6.8 | 3 | 400 |
| D901155 | 59.9 | 45.8 | 59 | 3 | 15.0 | 116 | 55.0 | 7.0 | 3 | 383 |
| D91058 | 57.2 | 41.7 | 54 | 3 | 13.5 | 108 | 58.7 | 7.3 | 3 | 400 |
| D91066 | 57.4 | 41.0 | 47 | 3 | 15.2 | 115 | 57.3 | 7.2 | 3 | 356 |
| D91103 | 60.7 | 46.1 | 70 | 0 | 14.3 | 106 | 60.9 | 7.0 | 3 | 339 |
| D91180 | 58.6 | 42.6 | 41 | 5 | 14.0 | 118 | 56.9 | 7.0 | 3 | 339 |
| D91309 | 57.9 | 44.1 | 59 | 3 | 14.2 | 110 | 57.7 | 7.0 | 3 | 331 |
| D91321 | 57.8 | 39.2 | 53 | 3 | 12.9 | 108 | 59.1 | 7.2 | 3 | 400 |
| D91306 | 58.2 | 42.9 | 54 | 3 | 14.0 | 114 | 56.8 | 7.0 | 3 | 400 |
| D91076 | 58.2 | 37.5 | 14 | 8 | 15.0 | 114 | 57.9 | 7.2 | 3 | 360 |
| D91080 | 57.2 | 41.2 | 42 | 2 | 13.8 | 102 | 58.2 | 7.1 | 3 | 380 |
| D91410 | 58.2 | 36.5 | 14 | 7 | 13.8 | 118 | 56.9 | 7.1 | 3 | 400 |

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Table 10

Bozeman, Mont.

Rep #: 1

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO | FALLING |
|----------|---------------|----------------|-----------|-----------|-----------------|---------------|------------|-------|------|-----------------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT | NUMBER (Sec) |
| Mindum | 62.8 | 44.6 | 70 | 1 | 14.8 | 113 | 63.0 | 6.5 | 1 | 340 |
| Munich | 62.1 | 46.1 | 76 | 2 | 15.5 | 117 | 64.8 | 7.1 | 2 | 353 |
| Ward | 62.6 | 43.1 | 69 | 2 | 15.5 | 124 | 61.5 | 6.9 | 1 | 343 |
| Rugby | 62.6 | 43.7 | 67 | 3 | 15.3 | 120 | 63.0 | 6.9 | 1 | 324 |
| Vic | 61.9 | 48.5 | 78 | 1 | 16.0 | 114 | 63.0 | 7.0 | 2 | 317 |
| Lloyd | 63.0 | 50.3 | 77 | 1 | 13.3 | 111 | 63.3 | 7.1 | 2 | 364 |
| Monroe | 60.3 | 46.7 | 75 | 2 | 15.4 | 107 | 63.6 | 7.0 | 2 | 327 |
| Renville | 62.6 | 46.3 | 66 | 1 | 15.7 | 122 | 63.9 | 6.8 | 2 | 340 |
| Medora | 61.9 | 45.7 | 78 | 1 | 16.1 | 117 | 61.1 | 7.1 | 2 | 352 |
| Sceptre | 61.9 | 44.4 | 73 | 2 | 15.1 | 120 | 63.0 | 7.0 | 2 | 369 |
| D87130 | 62.9 | 50.3 | 81 | 1 | 15.1 | 110 | 63.0 | 7.0 | 2 | 342 |
| D87240 | 61.2 | 50.3 | 80 | 2 | 14.6 | 113 | 63.0 | 7.0 | 2 | 363 |
| D88303 | 63.4 | 48.5 | 71 | 2 | 13.6 | 116 | 63.9 | 7.0 | 2 | 340 |
| D89135 | 62.8 | 48.1 | 82 | 0 | 15.9 | 113 | 62.4 | 7.3 | 3 | 352 |
| D901313 | 63.0 | 45.5 | 71 | 1 | 14.7 | 115 | 63.0 | 6.7 | 2 | 328 |
| D901419 | 61.2 | 38.3 | 43 | 2 | 15.1 | 110 | 61.5 | 6.7 | 2 | 369 |
| D901442 | 61.5 | 43.7 | 68 | 1 | 15.9 | 116 | 60.6 | 6.9 | 2 | 311 |
| D901486 | 61.4 | 45.5 | 73 | 2 | 14.9 | 112 | 63.0 | 7.1 | 2 | 309 |
| D901518 | 62.9 | 48.1 | 77 | 1 | 13.6 | 107 | 63.3 | 7.1 | 2 | 352 |
| D901536 | 62.4 | 44.2 | 71 | 1 | 15.5 | 118 | 64.2 | 6.2 | 1 | 347 |
| D901786 | 63.0 | 43.3 | 56 | 3 | 13.6 | 113 | 62.4 | 6.8 | 1 | 338 |
| D901155 | 61.6 | 44.8 | 73 | 1 | 16.5 | 114 | 60.6 | 6.9 | 2 | 354 |
| D91058 | 62.2 | 47.8 | 81 | 1 | 16.2 | 114 | 63.3 | 7.1 | 3 | 328 |
| D91066 | 62.2 | 45.7 | 77 | 1 | 16.6 | 112 | 61.5 | 7.2 | 3 | 340 |
| D91103 | 63.0 | 47.1 | 78 | 1 | 15.8 | 107 | 62.7 | 7.0 | 2 | 334 |
| D91180 | 61.6 | 44.1 | 69 | 1 | 15.6 | 111 | 61.8 | 7.0 | 2 | 311 |
| D91309 | 61.7 | 46.1 | 76 | 1 | 15.2 | 111 | 61.8 | 7.1 | 2 | 326 |
| D91321 | 62.2 | 46.5 | 71 | 1 | 14.5 | 110 | 62.0 | 7.1 | 2 | 362 |
| D91306 | 61.4 | 47.8 | 76 | 2 | 14.9 | 115 | 63.3 | 7.0 | 3 | 343 |
| D91076 | 62.7 | 49.8 | 73 | 1 | 14.0 | 100 | 63.3 | 7.2 | 3 | 388 |
| D91080 | 63.4 | 45.8 | 73 | 0 | 13.7 | 116 | 61.5 | 7.0 | 2 | 340 |
| D91410 | 62.8 | 42.6 | 51 | 1 | 12.6 | 104 | 61.1 | 7.0 | 1 | 386 |

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Table 11

Average of all Locations and Reps

Fargo, ND

| VARIETY | TW (lb/bu) | | KWT (grams) | | WHEAT PRO (14% mb) | | NIR HARD- NESS | | SEMO EXT (%) | | SEMO COLOR | | MIXO PAT | | FALLING NUMBER (Sec) | |
|----------|---------------|----|----------------|----|--------------------------|----|----------------------|----|--------------------|----|---------------|----|-------------|----|----------------------------|----|
| | Avg | SD | Avg | SD | Avg | SD | Avg | SD | Avg | SD | Avg | SD | Avg | SD | Avg | SD |
| Mindum | 59.7 ± 3.8 | | 37.2 ± 6.3 | | 13.7 ± 1.4 | | 101 ± 12.1 | | 61.9 ± 2.7 | | 6.5 ± 0.2 | | 1.3 ± 0.6 | | 332 ± 78.6 | |
| Munich | 59.0 ± 3.7 | | 38.9 ± 6.6 | | 14.0 ± 1.9 | | 103 ± 11.7 | | 63.6 ± 2.3 | | 6.9 ± 0.3 | | 2.5 ± 1.1 | | 353 ± 58.3 | |
| Ward | 58.7 ± 4.0 | | 36.9 ± 6.0 | | 14.4 ± 2.1 | | 109 ± 14.0 | | 61.6 ± 3.0 | | 6.8 ± 0.2 | | 0.9 ± 0.5 | | 332 ± 70.0 | |
| Rugby | 59.0 ± 3.7 | | 36.7 ± 5.6 | | 14.2 ± 1.6 | | 109 ± 11.1 | | 62.0 ± 2.2 | | 6.9 ± 0.2 | | 1.1 ± 0.6 | | 341 ± 66.0 | |
| Vic | 58.4 ± 4.1 | | 39.5 ± 7.1 | | 14.7 ± 1.9 | | 108 ± 11.7 | | 61.9 ± 3.3 | | 6.9 ± 0.3 | | 2.8 ± 0.9 | | 334 ± 67.3 | |
| Lloyd | 56.3 ± 5.4 | | 37.6 ± 8.9 | | 13.6 ± 2.1 | | 99 ± 13.4 | | 60.7 ± 2.7 | | 6.8 ± 0.4 | | 2.4 ± 1.0 | | 339 ± 87.9 | |
| Monroe | 57.9 ± 4.2 | | 39.6 ± 7.5 | | 14.3 ± 1.8 | | 105 ± 10.9 | | 61.8 ± 3.2 | | 6.9 ± 0.3 | | 3.3 ± 1.4 | | 355 ± 56.9 | |
| Renville | 58.5 ± 3.7 | | 36.9 ± 6.4 | | 14.5 ± 1.9 | | 111 ± 13.1 | | 63.0 ± 2.9 | | 6.8 ± 0.2 | | 3.4 ± 1.3 | | 350 ± 74.8 | |
| Medora | 58.2 ± 4.4 | | 36.9 ± 6.5 | | 15.1 ± 1.9 | | 112 ± 9.8 | | 59.6 ± 2.9 | | 6.9 ± 0.3 | | 3.5 ± 1.3 | | 344 ± 66.8 | |
| Sceptre | 57.8 ± 4.0 | | 35.8 ± 6.0 | | 14.4 ± 1.8 | | 106 ± 10.3 | | 61.5 ± 2.9 | | 6.8 ± 0.2 | | 3.6 ± 1.4 | | 353 ± 70.7 | |
| D87130 | 59.3 ± 3.9 | | 40.9 ± 7.8 | | 14.3 ± 1.9 | | 105 ± 10.4 | | 61.7 ± 2.9 | | 6.7 ± 0.2 | | 3.7 ± 1.4 | | 355 ± 72.3 | |
| D87240 | 57.2 ± 3.7 | | 39.7 ± 6.2 | | 13.9 ± 2.2 | | 103 ± 13.3 | | 60.9 ± 2.9 | | 6.9 ± 0.2 | | 3.9 ± 1.6 | | 356 ± 63.7 | |
| D88303 | 58.0 ± 4.8 | | 37.3 ± 8.8 | | 14.1 ± 1.8 | | 105 ± 13.8 | | 60.9 ± 2.9 | | 6.8 ± 0.2 | | 3.8 ± 1.3 | | 314 ± 87.4 | |
| D89135 | 58.4 ± 4.5 | | 38.2 ± 6.3 | | 15.0 ± 2.2 | | 107 ± 12.3 | | 61.7 ± 2.9 | | 7.1 ± 0.3 | | 4.4 ± 1.5 | | 332 ± 87.9 | |
| D901313 | 58.4 ± 4.1 | | 37.9 ± 6.0 | | 14.1 ± 2.2 | | 108 ± 14.9 | | 61.7 ± 3.4 | | 6.7 ± 0.2 | | 2.8 ± 1.3 | | 342 ± 66.2 | |
| D901419 | 59.0 ± 3.7 | | 34.7 ± 4.8 | | 14.5 ± 2.0 | | 110 ± 11.1 | | 60.3 ± 3.0 | | 6.6 ± 0.3 | | 2.8 ± 1.0 | | 364 ± 54.1 | |
| D901442 | 59.6 ± 3.4 | | 38.8 ± 5.1 | | 14.4 ± 2.3 | | 105 ± 12.8 | | 61.5 ± 3.2 | | 6.7 ± 0.3 | | 2.5 ± 0.8 | | 352 ± 59.1 | |
| D901486 | 57.2 ± 3.8 | | 37.3 ± 4.7 | | 14.1 ± 2.0 | | 101 ± 12.2 | | 60.0 ± 6.8 | | 6.9 ± 0.3 | | 2.6 ± 0.6 | | 350 ± 61.7 | |
| D901518 | 58.0 ± 3.9 | | 37.4 ± 6.3 | | 13.6 ± 2.0 | | 99 ± 12.2 | | 60.9 ± 2.8 | | 6.8 ± 0.3 | | 2.7 ± 0.6 | | 349 ± 73.6 | |
| D901536 | 58.2 ± 5.3 | | 36.2 ± 7.6 | | 14.3 ± 2.1 | | 103 ± 16.0 | | 61.5 ± 3.9 | | 6.8 ± 0.3 | | 2.4 ± 1.1 | | 329 ± 74.8 | |
| D901786 | 58.2 ± 4.5 | | 34.3 ± 6.0 | | 13.7 ± 1.9 | | 102 ± 12.4 | | 60.5 ± 2.1 | | 6.7 ± 0.3 | | 2.4 ± 0.7 | | 363 ± 53.5 | |
| D901155 | 59.7 ± 3.0 | | 37.7 ± 5.4 | | 14.6 ± 2.0 | | 109 ± 10.1 | | 59.8 ± 3.0 | | 6.9 ± 0.2 | | 2.8 ± 1.0 | | 354 ± 60.2 | |
| D91058 | 57.9 ± 4.0 | | 38.3 ± 6.1 | | 14.6 ± 2.3 | | 106 ± 12.4 | | 61.5 ± 2.9 | | 7.0 ± 0.3 | | 3.0 ± 1.2 | | 341 ± 70.3 | |
| D91066 | 57.8 ± 4.2 | | 38.1 ± 5.9 | | 15.1 ± 2.4 | | 106 ± 13.8 | | 61.1 ± 3.9 | | 7.0 ± 0.3 | | 2.9 ± 1.0 | | 336 ± 81.4 | |
| D91103 | 59.2 ± 4.1 | | 39.2 ± 5.7 | | 14.9 ± 2.5 | | 102 ± 14.6 | | 61.3 ± 3.1 | | 6.9 ± 0.3 | | 2.7 ± 1.0 | | 304 ± 84.0 | |
| D91180 | 57.9 ± 4.5 | | 36.8 ± 7.3 | | 14.7 ± 2.1 | | 103 ± 11.9 | | 60.6 ± 3.1 | | 6.9 ± 0.2 | | 3.0 ± 1.1 | | 344 ± 70.9 | |
| D91309 | 58.1 ± 3.7 | | 38.9 ± 5.7 | | 14.3 ± 2.0 | | 106 ± 14.8 | | 61.3 ± 3.0 | | 6.9 ± 0.3 | | 2.6 ± 0.8 | | 327 ± 78.7 | |
| D91321 | 58.2 ± 3.6 | | 37.4 ± 5.7 | | 13.9 ± 1.6 | | 107 ± 9.6 | | 60.5 ± 2.6 | | 7.0 ± 0.2 | | 3.2 ± 0.7 | | 360 ± 64.1 | |
| D91306 | 57.9 ± 3.7 | | 37.8 ± 6.1 | | 13.9 ± 2.1 | | 103 ± 14.8 | | 60.1 ± 2.6 | | 6.9 ± 0.2 | | 2.7 ± 0.9 | | 343 ± 53.3 | |
| D91076 | 57.1 ± 5.1 | | 35.7 ± 8.5 | | 14.1 ± 2.0 | | 98 ± 14.2 | | 60.8 ± 3.6 | | 7.0 ± 0.3 | | 2.6 ± 0.9 | | 350 ± 79.4 | |
| D91080 | 57.9 ± 4.3 | | 37.4 ± 7.4 | | 13.8 ± 2.3 | | 100 ± 15.8 | | 60.8 ± 3.2 | | 6.9 ± 0.3 | | 2.4 ± 1.3 | | 341 ± 82.7 | |
| D91410 | 57.6 ± 4.7 | | 34.0 ± 6.6 | | 13.6 ± 2.2 | | 103 ± 12.2 | | 59.7 ± 2.5 | | 6.9 ± 0.3 | | 2.9 ± 1.4 | | 369 ± 53.2 | |

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USDA WHEAT QUALITY LAB

FARGO, ND

Table 12

| VARIETY | Field Plots | | | | | | | | | | Table 12 | | | | | | | | | |
|----------|---------------|-------------|-----------|-----------------|-----------------|---------------|--------------|-------------|-------|------|-----------------|--------------------------|-----------------|--------------|-------|----------------|-----------------|-------|-----|--|
| | Minot, ND | | FARGO, ND | | | | | | | | | | | | | | | | | |
| | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | NIR | EXTRACTION | | DUST | MIX | SPECKS (per 10 sq in) | SEMO | | FALL | SPAGH | COOKED | FIRM- | RES | |
| | | | | PRO (14% mb) | ASH (14% mb) | HARD- NESS | TOTAL (%) | SEMO (%) | COLOR | PAT | PRO (14% mb) | | ASH (14% mb) | NUM (sec) | COLOR | WEIGHT (gm) | NESS (gm/cm) | (gm) | | |
| Monroe | 59.8 | 39.2 | 52 | 1 | 13.8 | 1.68 | 122 | 78.8 | 62.8 | 7.3 | 2 | 27 | 13.5 | 0.75 | 391 | 7.8 | 32.3 | 7.20 | 6.6 | |
| Renville | 57.1 | 31.0 | 10 | 10 | 14.8 | 1.63 | 127 | 79.5 | 62.5 | 7.2 | 2 | 40 | 14.3 | 0.69 | 354 | 8.0 | 31.6 | 7.74 | 6.3 | |
| Rugby | 57.2 | 32.3 | 33 | 5 | 15.0 | 1.83 | 125 | 84.1 | 61.7 | 6.8 | 1 | 47 | 14.0 | 0.74 | 239 | 6.9 | 32.8 | 6.52 | 6.3 | |
| Vic | 57.0 | 32.8 | 30 | 6 | 14.7 | 1.88 | 123 | 78.5 | 60.3 | 7.1 | 3 | 33 | 14.3 | 0.76 | 238 | 7.2 | 32.1 | 7.88 | 6.8 | |

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Table 13

| VARIETY | | Field Plots | | | | | | | | | | | | | | | | | | | | | |
|----------|--|---------------|------|-------------|----|-----------|-----------|-----------------|-----------------|----------------------|--------------|-------------|---------------|------------|--------------------------|-----------------|-----------------|----------------------|----------------|--------------------------|--------------------------|-----|-------------|
| | | TW (lb/bu) | | KWT (gm) | | LG (%) | SM (%) | WHEAT | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | | RES (gm) |
| | | | | | | | | PRO (14% mb) | ASH (14% mb) | | TOTAL (%) | SEMO (%) | | | | PRO (14% mb) | ASH (14% mb) | | | | | | |
| Cando | | 50.5 | 21.5 | 3 | 15 | 14.8 | 2.31 | 98 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 356 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Lloyd | | 47.7 | 25.8 | 8 | 10 | 15.6 | 2.38 | 99 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 266 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Medora | | 52.2 | 26.9 | 20 | 5 | 15.4 | 2.21 | 106 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 290 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Monroe | | 51.5 | 28.1 | 25 | 4 | 14.9 | 2.11 | 104 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 291 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Munich | | 55.4 | 26.7 | 19 | 4 | 13.9 | 2.06 | 102 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 345 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Renville | | 54.9 | 28.0 | 13 | 7 | 15.1 | 2.14 | 114 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 267 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Rugby | | 53.9 | 26.5 | 16 | 7 | 15.0 | 2.28 | 104 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 258 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Vic | | 54.0 | 30.2 | 24 | 3 | 15.3 | 2.15 | 107 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 374 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |
| Ward | | 54.4 | 27.3 | 18 | 7 | 15.1 | 2.18 | 105 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 400 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 | |

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Table 14

| VARIETY | Field Plots | | | | | | | | | | Table 14 | | | | | | | | | |
|----------|---------------|-------------|-----------|-----------|-----------------|-----------------|----------------------|--------------|-------------|---------------|------------|--------------------------|-----------------|-----------------|----------------------|----------------|--------------------------|--------------------------|-------------|--|
| | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | RES (gm) | |
| | | | | | PRO (1.4%mb) | ASH (1.4%mb) | | TOTAL (%) | SEMO (%) | | | | PRO (1.4%mb) | ASH (1.4%mb) | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Lloyd | 58.2 | 38.5 | 31 | 5 | 13.6 | 1.79 | 123 | 79.8 | 53.0 | 7.5 | 4 | 4 | 13.1 | 0.74 | 369 | 7.8 | 31.3 | 7.35 | 6.4 | |
| Medora | 60.4 | 35.2 | 30 | 4 | 13.4 | 1.79 | 126 | 80.0 | 62.1 | 7.4 | 4 | 33 | 13.1 | 0.71 | 400 | 8.0 | 30.7 | 7.30 | 6.2 | |
| Monroe | 61.5 | 45.8 | 69 | 1 | 14.5 | 1.70 | 125 | 79.3 | 63.9 | 7.3 | 4 | 37 | 13.9 | 0.68 | 400 | 7.8 | 31.7 | 7.76 | 6.6 | |
| Munich | 59.1 | 33.9 | 42 | 3 | 14.3 | 1.79 | 133 | 80.0 | 63.0 | 7.5 | 3 | 40 | 14.1 | 0.71 | 376 | 8.3 | 32.8 | 7.75 | 5.9 | |
| Renville | 60.5 | 37.6 | 37 | 3 | 13.5 | 1.69 | 131 | 79.6 | 62.6 | 7.2 | 3 | 27 | 13.2 | 0.65 | 400 | 8.1 | 32.0 | 7.31 | 6.3 | |
| Rugby | 60.5 | 40.3 | 51 | 2 | 14.3 | 1.69 | 124 | 79.5 | 62.9 | 7.3 | 1 | 27 | 13.8 | 0.69 | 400 | 8.0 | 32.7 | 7.38 | 6.1 | |
| Vic | 60.8 | 43.5 | 66 | 2 | 14.3 | 1.68 | 126 | 78.7 | 62.0 | 7.3 | 2 | 27 | 13.7 | 0.66 | 398 | 8.2 | 32.2 | 8.08 | 5.9 | |
| Ward | 61.4 | 42.2 | 52 | 3 | 14.1 | 1.71 | 129 | 79.6 | 63.3 | 7.2 | 1 | 40 | 13.6 | 0.71 | 383 | 7.9 | 32.7 | 6.77 | 6.7 | |

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Table 15

Imperial Valley, CA Advanced - Exp 95201

| VARIETY | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | RES (gm) |
|------------|---------------|-------------|-----------|-----------|-----------------|-----------------|--------------|----------------------|-------------|-----------------|---------------|------------|--------------------------|-----------------|-----|----------------------|----------------|--------------------------|--------------------------|-------------|
| | | | | | PRO (14% mb) | ASH (14% mb) | TOTAL (%) | | SEMO (%) | PRO (14% mb) | | | | ASH (14% mb) | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 95201 E-2 | 66.2 | 55.9 | 96 | 0 | 11.5 | 1.47 | 133 | 83.0 | 62.5 | 6.2 | 3 | 40 | 10.5 | 0.63 | 422 | 7.1 | 32.9 | 5.28 | 6.8 | |
| 95201 E-6 | 67.3 | 52.4 | 85 | 0 | 11.3 | 1.58 | 124 | 83.5 | 64.8 | 6.3 | 2 | 23 | 10.4 | 0.66 | 404 | 7.3 | 32.8 | 4.40 | 7.8 | |
| 95201 E-8 | 64.9 | 51.8 | 81 | 0 | 11.6 | 1.52 | 130 | 84.0 | 64.4 | 6.5 | 3 | 27 | 10.6 | 0.64 | 450 | 7.4 | 32.7 | 4.57 | 7.4 | |
| 95201 E-11 | 65.9 | 53.8 | 89 | 0 | 11.8 | 1.50 | 127 | 83.0 | 61.8 | 6.8 | 2 | 27 | 10.6 | 0.64 | 425 | 7.6 | 32.0 | 4.69 | 7.5 | |
| 95201 E-13 | 67.0 | 59.2 | 95 | 0 | 11.4 | 1.46 | 129 | 85.2 | 68.0 | 6.9 | 2 | 33 | 10.3 | 0.62 | 513 | 7.5 | 32.7 | 4.44 | 7.5 | |
| 95201 E-14 | 66.0 | 59.5 | 91 | 0 | 10.3 | 1.51 | 119 | 83.8 | 65.6 | 6.9 | 2 | 23 | 9.3 | 0.65 | 443 | 7.6 | 32.9 | 4.47 | 7.6 | |
| 95201 E-21 | 65.6 | 57.1 | 93 | 0 | 11.7 | 1.54 | 113 | 84.3 | 67.1 | 6.2 | 1 | 17 | 10.9 | 0.64 | 441 | 7.0 | 32.5 | 4.62 | 6.6 | |
| 95201 E-22 | 65.8 | 56.2 | 89 | 0 | 11.7 | 1.47 | 133 | 85.0 | 66.4 | 6.1 | 2 | 33 | 10.7 | 0.65 | 447 | 6.8 | 32.0 | 5.36 | 7.4 | |
| 95201 E-27 | 67.2 | 58.8 | 88 | 0 | 11.8 | 1.49 | 134 | 84.6 | 65.6 | 6.3 | 3 | 43 | 10.3 | 0.63 | 498 | 6.9 | 32.6 | 5.38 | 7.4 | |
| 95201 E-28 | 66.5 | 47.1 | 72 | 0 | 11.6 | 1.50 | 131 | 84.0 | 64.5 | 6.7 | 3 | 20 | 10.7 | 0.66 | 487 | 7.5 | 32.7 | 5.49 | 7.1 | |
| 95201 E-30 | 66.4 | 60.2 | 91 | 0 | 12.5 | 1.65 | 143 | 85.7 | 67.6 | 6.8 | 1 | 47 | 10.9 | 0.71 | 448 | 7.6 | 32.3 | 5.72 | 6.6 | |
| 95201 E-31 | 65.3 | 61.3 | 91 | 0 | 11.4 | 1.51 | 128 | 84.5 | 65.9 | 6.7 | 3 | 27 | 10.1 | 0.68 | 450 | 7.3 | 33.0 | 5.27 | 7.1 | |
| 95201 E-32 | 67.5 | 58.8 | 91 | 0 | 10.3 | 1.43 | 124 | 83.4 | 63.4 | 6.5 | 2 | 40 | 9.3 | 0.61 | 446 | 7.4 | 34.5 | 4.41 | 7.3 | |
| 95201 E-33 | 67.0 | 51.5 | 79 | 0 | 11.6 | 1.57 | 137 | 86.8 | 66.1 | 6.7 | 3 | 37 | 10.2 | 0.67 | 436 | 7.4 | 33.6 | 5.66 | 7.3 | |
| 95201 E-34 | 64.5 | 57.1 | 90 | 0 | 12.4 | 1.56 | 131 | 77.9 | 60.1 | 7.1 | 3 | 13 | 10.8 | 0.60 | 501 | 8.2 | 32.4 | 5.54 | 7.4 | |
| 95201 E-35 | 65.5 | 60.6 | 93 | 0 | 11.1 | 1.44 | 131 | 81.3 | 63.6 | 7.1 | 3 | 20 | 9.3 | 0.60 | 454 | 8.2 | 32.6 | 5.32 | 7.2 | |

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Table 16

Imperial Valley, CA Advanced - Exp 95203

| VARIETY | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | NIR | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | RES (gm) |
|------------|---------------|-------------|-----------|-----------|-----------------|------------|-----|--------------|-------------|---------------|------------|--------------------------|-----------------|-----------------|----------------------|----------------|--------------------------|--------------------------|-------------|
| | | | | | PRO (14% mb) | ASH (%) | | TOTAL (%) | SEMO (%) | | | | PRO (14% mb) | ASH (14% mb) | | | | | |
| 95203 E-2 | 63.7 | 51.3 | 85 | 0 | 10.6 | 1.52 | 124 | 81.9 | 64.4 | 6.9 | 3 | 10 | 9.5 | 0.69 | 430 | 7.8 | 31.9 | 5.06 | 6.8 |
| 95203 E-6 | 67.6 | 64.9 | 92 | 0 | 10.8 | 1.46 | 132 | 81.2 | 64.3 | 6.6 | 1 | 20 | 9.6 | 0.59 | 443 | 7.5 | 33.6 | 4.64 | 7.1 |
| 95203 E-15 | 66.3 | 54.6 | 91 | 0 | 11.6 | 1.46 | 143 | 82.2 | 63.9 | 6.6 | 3 | 23 | 10.1 | 0.57 | 428 | 7.7 | 33.3 | 4.77 | 7.3 |
| 95203 E-20 | 67.3 | 58.5 | 94 | 0 | 12.2 | 1.53 | 139 | 81.3 | 65.4 | 6.4 | 4 | 23 | 10.7 | 0.61 | 497 | 7.1 | 32.7 | 5.68 | 6.0 |
| 95203 E-21 | 66.1 | 62.1 | 92 | 0 | 12.2 | 1.48 | 131 | 84.2 | 65.9 | 6.3 | 4 | 27 | 10.8 | 0.61 | 476 | 7.4 | 32.1 | 5.07 | 6.7 |
| 95203 E-28 | 67.2 | 57.3 | 92 | 0 | 11.8 | 1.53 | 133 | 82.2 | 66.3 | 6.6 | 6 | 13 | 10.6 | 0.66 | 427 | 7.5 | 31.3 | 5.35 | 7.5 |
| 95203 E-29 | 65.2 | 60.2 | 91 | 0 | 11.5 | 1.49 | 127 | 82.5 | 65.9 | 6.7 | 4 | 20 | 10.2 | 0.64 | 467 | 7.5 | 33.3 | 4.83 | 7.0 |
| 95203 E-30 | 67.6 | 60.2 | 93 | 0 | 11.0 | 1.45 | 131 | 81.4 | 63.8 | 6.5 | 1 | 30 | 9.8 | 0.57 | 430 | 7.4 | 33.1 | 4.60 | 7.7 |
| 95203 E-31 | 67.0 | 51.3 | 81 | 0 | 11.3 | 1.53 | 125 | 82.4 | 65.7 | 6.7 | 2 | 33 | 10.1 | 0.63 | 449 | 7.7 | 32.6 | 5.18 | 6.5 |
| 95203 E-32 | 64.4 | 58.8 | 93 | 0 | 12.8 | 1.55 | 125 | 83.1 | 65.0 | 6.9 | 4 | 33 | 11.4 | 0.63 | 465 | 8.2 | 32.9 | 5.85 | 7.0 |
| 95203 E-34 | 66.3 | 49.0 | 78 | 0 | 12.5 | 1.45 | 130 | 81.4 | 64.3 | 6.6 | 4 | 33 | 11.4 | 0.61 | 461 | 7.5 | 32.7 | 5.51 | 7.1 |
| 95203 E-36 | 66.6 | 50.3 | 82 | 0 | 11.5 | 1.48 | 128 | 81.0 | 65.7 | 6.6 | 4 | 47 | 10.6 | 0.62 | 456 | 7.6 | 32.5 | 5.28 | 6.8 |
| 95203 E-38 | 65.8 | 57.8 | 91 | 0 | 13.2 | 1.52 | 126 | 80.4 | 63.8 | 6.7 | 5 | 30 | 12.0 | 0.64 | 480 | 7.3 | 31.7 | 5.98 | 6.5 |

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Imperial Valley, CA Advanced - Exp 95205 FARGO, ND Table 17

| VARIETY | Imperial Valley, CA Advanced - Exp 95205 | | | | | | | | | | Advanced - Exp 95205 | | | | | | | | |
|------------|---|-------------|-----------|-----------|-----------------|-----------------|----------------------|--------------|-------------|---------------|----------------------|--------------------------|-----------------|-----------------|----------------------|----------------|--------------------------|--------------------------|-------------|
| | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | RES (gm) |
| | | | | | PRO (14% mb) | ASH (14% mb) | | TOTAL (%) | SEMO (%) | | | | PRO (14% mb) | ASH (14% mb) | | | | | |
| 95205 E-1 | 64.6 | 54.6 | 88 | 1 | 13.2 | 1.67 | 131 | 81.0 | 62.0 | 6.7 | 3 | 23 | 11.8 | 0.68 | 444 | 7.5 | 32.3 | 6.04 | 6.4 |
| 95205 E-2 | 64.7 | 55.9 | 89 | 0 | 13.4 | 1.66 | 133 | 81.8 | 64.6 | 6.7 | 5 | 27 | 11.9 | 0.68 | 434 | 7.6 | 31.5 | 6.09 | 6.0 |
| 95205 E-3 | 65.5 | 49.0 | 81 | 0 | 14.0 | 1.74 | 127 | 81.9 | 64.4 | 7.3 | 5 | 10 | 12.1 | 0.68 | 484 | 8.3 | 31.6 | 5.85 | 5.5 |
| 95205 E-4 | 63.5 | 56.2 | 85 | 1 | 12.1 | 1.51 | 113 | 81.2 | 64.3 | 6.7 | 6 | 10 | 10.7 | 0.66 | 496 | 7.4 | 32.6 | 5.68 | 7.3 |
| 95205 E-5 | 66.5 | 47.8 | 83 | 0 | 12.4 | 1.49 | 133 | 81.8 | 64.3 | 6.8 | 4 | 13 | 10.9 | 0.62 | 457 | 7.6 | 32.0 | 5.81 | 6.6 |
| 95205 E-6 | 67.0 | 59.2 | 91 | 0 | 12.1 | 1.41 | 126 | 82.9 | 65.4 | 6.4 | 2 | 13 | 10.4 | 0.56 | 452 | 7.3 | 32.9 | 5.06 | 6.4 |
| 95205 E-9 | 64.1 | 53.8 | 80 | 1 | 12.8 | 1.44 | 129 | 82.4 | 63.6 | 6.9 | 2 | 23 | 11.3 | 0.58 | 475 | 7.8 | 32.0 | 5.01 | 6.8 |
| 95205 E-10 | 63.0 | 57.8 | 88 | 0 | 14.0 | 1.68 | 118 | 81.1 | 62.2 | 6.9 | 6 | 27 | 12.7 | 0.64 | 609 | 8.0 | 31.4 | 7.16 | 5.5 |
| 95205 E-11 | 64.5 | 58.5 | 91 | 0 | 13.2 | 1.57 | 127 | 82.5 | 64.5 | 6.6 | 5 | 17 | 11.8 | 0.62 | 475 | 7.6 | 31.4 | 5.60 | 6.2 |
| 95205 E-12 | 65.1 | 54.9 | 89 | 0 | 12.1 | 1.48 | 125 | 83.7 | 65.6 | 6.6 | 5 | 27 | 10.5 | 0.62 | 487 | 7.6 | 32.1 | 5.25 | 6.4 |
| 95205 E-13 | 64.8 | 54.3 | 86 | 0 | 12.0 | 1.48 | 133 | 84.0 | 66.3 | 6.6 | 5 | 30 | 10.6 | 0.63 | 458 | 7.6 | 31.6 | 5.23 | 7.5 |

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Table 18

| VARIETY | Advanced - Exp 95204 | | | | | | | | | | Table 10 | | | | | | | | | |
|------------|----------------------|-------------|------------|-----------|-----------------|-----------------|----------------------|--------------|-------------|---------------|------------|--------------------------|-----------------|-----------------|----------------------|----------------|--------------------------|--------------------------|-----------------|-------------|
| | TW (lb/bu) | KWT (gm) | LGT (%) | SM (%) | WHEAT | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | | RES (gm) |
| | | | | | PRO (14% mb) | ASH (14% mb) | | TOTAL (%) | SEMO (%) | | | | PRO (14% mb) | ASH (14% mb) | | | | NESS (gm/cm) | NESS (gm/cm) | |
| 95204 E-1 | 60.8 | 44.4 | 65 | 1 | 13.1 | 1.58 | 129 | 83.3 | 64.6 | 6.9 | 7 | 17 | 11.9 | 0.70 | 452 | 7.9 | 33.5 | 5.38 | 6.2 | |
| 95204 E-3 | 63.8 | 43.3 | 72 | 0 | 14.3 | 1.54 | 136 | 81.8 | 61.4 | 6.6 | 5 | 10 | 13.1 | 0.65 | 473 | 7.2 | 33.6 | 5.64 | 6.1 | |
| 95204 E-4 | 63.6 | 47.6 | 66 | 1 | 13.8 | 1.48 | 132 | 81.2 | 61.4 | 6.5 | 5 | 17 | 12.8 | 0.64 | 472 | 7.2 | 32.8 | 5.72 | 6.3 | |
| 95204 E-6 | 65.8 | 52.1 | 74 | 1 | 12.8 | 1.54 | 130 | 81.6 | 63.0 | 6.6 | 2 | 23 | 11.7 | 0.62 | 504 | 7.6 | 33.8 | 4.75 | 6.9 | |
| 95204 E-12 | 65.6 | 49.5 | 69 | 1 | 12.4 | 1.49 | 126 | 80.8 | 63.3 | 7.1 | 3 | 17 | 11.1 | 0.62 | 472 | 8.1 | 33.7 | 5.16 | 6.7 | |
| 95204 E-13 | 63.4 | 46.1 | 60 | 1 | 13.9 | 1.64 | 134 | 82.4 | 62.6 | 6.9 | 4 | 17 | 12.7 | 0.69 | 477 | 7.9 | 32.4 | 6.19 | 6.3 | |
| 95204 E-15 | 64.2 | 46.9 | 75 | 0 | 13.3 | 1.58 | 129 | 81.6 | 62.2 | 6.7 | 2 | 17 | 12.0 | 0.64 | 398 | 7.6 | 32.7 | 5.79 | 6.3 | |
| 95204 E-17 | 64.7 | 42.2 | 62 | 1 | 13.2 | 1.65 | 127 | 82.6 | 64.4 | 6.7 | 4 | 27 | 12.4 | 0.69 | 524 | 7.4 | 32.7 | 5.97 | 6.8 | |
| 95204 E-21 | 63.2 | 53.8 | 81 | 0 | 13.7 | 1.54 | 129 | 82.4 | 63.3 | 6.5 | 5 | 30 | 12.9 | 0.67 | 481 | 7.3 | 32.9 | 5.97 | 6.5 | |
| 95204 E-24 | 64.8 | 48.5 | 74 | 0 | 13.2 | 1.64 | 129 | 82.6 | 63.9 | 6.9 | 3 | 20 | 12.3 | 0.68 | 529 | 7.5 | 32.8 | 5.83 | 6.4 | |
| 95204 E-25 | 65.1 | 48.5 | 81 | 0 | 13.2 | 1.62 | 125 | 82.1 | 65.1 | 6.9 | 3 | 33 | 12.0 | 0.65 | 502 | 7.6 | 32.3 | 6.02 | 6.2 | |
| 95204 E-27 | 64.8 | 50.3 | 78 | 0 | 14.3 | 1.77 | 123 | 82.6 | 64.2 | 6.8 | 4 | 27 | 13.3 | 0.74 | 526 | 7.5 | 31.8 | 6.92 | 6.0 | |
| 95204 E-28 | 65.1 | 47.6 | 80 | 0 | 13.6 | 1.67 | 133 | 81.9 | 64.0 | 6.8 | 5 | 23 | 12.7 | 0.72 | 437 | 7.5 | 31.4 | 6.01 | 6.5 | |
| 95204 E-29 | 61.1 | 45.7 | 64 | 1 | 13.0 | 1.69 | 118 | 82.0 | 64.4 | 6.9 | 5 | 23 | 11.9 | 0.73 | 478 | 7.4 | 32.7 | 5.85 | 6.3 | |
| 95204 E-30 | 65.4 | 49.3 | 76 | 1 | 12.6 | 1.61 | 127 | 82.8 | 63.3 | 6.6 | 3 | 30 | 11.7 | 0.66 | 429 | 7.4 | 33.3 | 5.47 | 6.8 | |
| 95204 E-31 | 64.8 | 41.8 | 59 | 2 | 13.2 | 1.69 | 129 | 81.8 | 62.5 | 7.0 | 6 | 10 | 12.2 | 0.71 | 487 | 7.7 | 34.2 | 5.81 | 7.0 | |
| 95204 E-32 | 62.1 | 48.5 | 76 | 1 | 14.4 | 1.77 | 125 | 80.6 | 61.3 | 7.3 | 7 | 30 | 13.5 | 0.72 | 511 | 8.3 | 32.1 | 7.20 | 5.9 | |
| 95204 E-33 | 64.6 | 52.1 | 82 | 0 | 15.2 | 1.68 | 136 | 81.0 | 62.0 | 6.5 | 10 | 10 | 14.2 | 0.68 | 564 | 7.3 | 31.9 | 7.27 | 5.6 | |
| 95204 E-34 | 64.8 | 44.8 | 76 | 0 | 14.2 | 1.58 | 130 | 82.0 | 63.2 | 6.7 | 5 | 40 | 13.6 | 0.64 | 452 | 7.3 | 33.0 | 6.63 | 6.4 | |
| 95204 E-36 | 62.8 | 38.8 | 40 | 4 | 14.4 | 1.64 | 122 | 80.0 | 61.2 | 6.9 | 6 | 10 | 14.0 | 0.70 | 517 | 7.5 | 31.3 | 7.36 | 6.0 | |
| 95204 E-37 | 63.8 | 42.7 | 73 | 0 | 15.2 | 1.71 | 136 | 82.9 | 62.6 | 6.9 | 6 | 10 | 14.0 | 0.68 | 499 | 7.8 | 33.1 | 6.34 | 6.0 | |
| 95204 E-38 | 64.3 | 49.0 | 79 | 0 | 14.5 | 1.65 | 132 | 82.6 | 63.0 | 6.6 | 5 | 23 | 13.6 | 0.66 | 554 | 7.3 | 32.8 | 6.86 | 5.7 | |

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Table 19

| Imperial Valley, CA Advanced - Exp 95207 | | | | | | | | | | | | | | | | | | | | |
|---|---------------|-------------|-----------|-----------|----------------|----------------|--------------|----------------------|-------------|----------------|---------------|------------|--------------------------|----------------|-----|----------------------|----------------|--------------------------|--------------------------|-------------|
| VARIETY | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | RES (gm) |
| | | | | | PRO (14%mb) | ASH (14%mb) | TOTAL (%) | | SEMO (%) | PRO (14%mb) | | | | ASH (14%mb) | | | | | | |
| 95207 E-1 | 65.0 | 55.6 | 91 | 0 | 14.7 | 1.53 | 124 | 81.9 | 63.9 | 6.8 | 3 | 23 | 13.9 | 0.68 | 466 | 7.6 | 31.3 | 7.93 | 5.7 | |
| 95207 E-2 | 64.8 | 58.8 | 93 | 0 | 15.0 | 1.52 | 131 | 81.1 | 63.0 | 6.8 | 2 | 27 | 14.1 | 0.68 | 477 | 7.5 | 32.0 | 8.01 | 6.0 | |
| 95207 E-3 | 65.7 | 49.0 | 83 | 0 | 15.4 | 1.65 | 131 | 79.1 | 59.3 | 7.3 | 1 | 27 | 14.2 | 0.67 | 439 | 8.4 | 33.8 | 6.71 | 5.4 | |
| 95207 E-4 | 63.4 | 52.1 | 84 | 0 | 13.2 | 1.45 | 117 | 79.9 | 64.4 | 6.8 | 3 | 17 | 12.4 | 0.66 | 548 | 7.4 | 32.2 | 7.23 | 6.2 | |
| 95207 E-5 | 65.1 | 44.6 | 60 | 0 | 13.1 | 1.47 | 113 | 80.6 | 63.7 | 6.8 | 3 | 17 | 12.4 | 0.64 | 463 | 7.7 | 32.8 | 6.62 | 6.7 | |
| 95207 E-6 | 65.2 | 51.5 | 75 | 0 | 13.2 | 1.45 | 127 | 0.0 | 81.6 | 6.5 | 10 | 63 | 12.2 | 0.60 | 2 | 7.5 | 33.3 | 5.93 | 7.1 | |
| 95207 E-9 | 62.6 | 47.6 | 73 | 0 | 14.3 | 1.45 | 130 | 81.3 | 61.6 | 7.0 | 7 | 10 | 13.3 | 0.62 | 506 | 8.1 | 33.5 | 6.34 | 6.5 | |
| 95207 E-10 | 63.4 | 54.9 | 82 | 0 | 15.1 | 1.51 | 125 | 79.5 | 61.7 | 7.2 | 8 | 13 | 14.1 | 0.62 | 630 | 8.4 | 32.6 | 7.60 | 6.4 | |
| 95207 E-11 | 63.3 | 51.5 | 82 | 0 | 14.2 | 1.50 | 121 | 80.7 | 62.1 | 6.8 | 7 | 10 | 13.5 | 0.61 | 522 | 8.0 | 30.2 | 7.00 | 6.0 | |
| 95207 E-12 | 62.3 | 47.8 | 63 | 0 | 13.5 | 1.47 | 123 | 81.9 | 62.2 | 6.7 | 7 | 20 | 12.5 | 0.63 | 491 | 8.0 | 31.8 | 6.21 | 6.6 | |
| 95207 E-13 | 62.3 | 46.5 | 65 | 0 | 13.7 | 1.54 | 128 | 80.5 | 61.9 | 6.7 | 7 | 27 | 12.6 | 0.64 | 476 | 7.9 | 32.3 | 6.32 | 7.1 | |

| VARIETY | TW (lb/bu) | | KWT (gm) | LG (%) | SM (%) | WHEAT | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- | |
|-------------|-----------------|-----------------|-------------|-----------|-----------|--------------|-------------|----------------------|-----------------|-----------------|---------------|------------|--------------------------|-----------------|--------------|----------------------|----------------|--------------------------|-------|--|
| | PRO (14% mb) | ASH (14% mb) | | | | TOTAL (%) | SEMO (%) | | PRO (14% mb) | ASH (14% mb) | | | | NESS (gm/cm) | RESS (gm) | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 955202 E-2 | 64.4 | 49.5 | 82 | 0 | 14.6 | 1.67 | 142 | 82.4 | 63.9 | 6.3 | 6 | 20 | 13.3 | 0.65 | 504 | 7.2 | 32.5 | 6.14 | 6.4 | |
| 955202 E-6 | 66.0 | 48.1 | 71 | 1 | 13.7 | 1.66 | 134 | 83.4 | 64.3 | 6.4 | 3 | 17 | 12.4 | 0.64 | 422 | 7.4 | 33.7 | 5.65 | 6.7 | |
| 955202 E-8 | 63.2 | 46.5 | 69 | 1 | 12.9 | 1.54 | 128 | 81.8 | 63.2 | 6.6 | 3 | 23 | 11.8 | 0.62 | 457 | 7.4 | 33.3 | 5.68 | 6.6 | |
| 955202 E-11 | 63.4 | 41.2 | 63 | 1 | 13.5 | 1.68 | 121 | 80.6 | 62.5 | 7.0 | 5 | 27 | 12.5 | 0.69 | 466 | 7.7 | 31.4 | 6.38 | 5.8 | |
| 955202 E-13 | 65.7 | 49.8 | 83 | 0 | 13.4 | 1.55 | 134 | 82.1 | 64.1 | 6.9 | 6 | 17 | 12.3 | 0.60 | 518 | 7.7 | 33.0 | 5.94 | 6.2 | |
| 955202 E-18 | 65.2 | 52.9 | 82 | 0 | 13.7 | 1.60 | 137 | 82.3 | 63.5 | 6.4 | 5 | 17 | 12.5 | 0.62 | 445 | 7.1 | 33.1 | 6.08 | 5.9 | |
| 955202 E-19 | 64.3 | 47.8 | 83 | 1 | 13.6 | 1.65 | 138 | 82.2 | 64.1 | 6.4 | 6 | 13 | 12.3 | 0.63 | 420 | 7.1 | 34.1 | 5.77 | 5.7 | |
| 955202 E-20 | 64.6 | 48.3 | 76 | 1 | 13.8 | 1.56 | 135 | 82.0 | 62.7 | 6.4 | 5 | 23 | 12.2 | 0.61 | 461 | 7.2 | 31.5 | 5.96 | 5.4 | |
| 955202 E-21 | 64.3 | 50.3 | 78 | 1 | 14.5 | 1.72 | 130 | 80.8 | 61.1 | 6.3 | 4 | 17 | 13.5 | 0.65 | 450 | 6.9 | 31.0 | 6.25 | 5.7 | |
| 955202 E-22 | 63.3 | 47.6 | 77 | 1 | 13.3 | 1.60 | 131 | 82.2 | 61.7 | 6.2 | 4 | 13 | 12.3 | 0.67 | 439 | 6.9 | 32.4 | 6.32 | 6.0 | |
| 955202 E-23 | 64.5 | 50.8 | 77 | 1 | 12.0 | 1.61 | 128 | 81.4 | 63.6 | 6.9 | 3 | 23 | 10.9 | 0.67 | 475 | 7.8 | 32.8 | 5.81 | 6.2 | |
| 955202 E-24 | 64.1 | 50.3 | 69 | 1 | 12.3 | 1.60 | 124 | 83.0 | 64.3 | 6.9 | 3 | 33 | 10.6 | 0.66 | 458 | 8.0 | 33.2 | 5.41 | 6.5 | |
| 955202 E-27 | 64.5 | 46.3 | 62 | 1 | 13.6 | 1.59 | 133 | 82.3 | 63.4 | 6.5 | 4 | 27 | 12.4 | 0.69 | 497 | 7.2 | 30.8 | 6.17 | 6.1 | |
| 955202 E-28 | 63.4 | 35.8 | 37 | 3 | 14.0 | 1.65 | 124 | 80.9 | 61.9 | 6.7 | 5 | 17 | 13.5 | 0.71 | 502 | 7.6 | 31.3 | 6.23 | 5.8 | |
| 955202 E-29 | 64.7 | 41.5 | 59 | 2 | 13.7 | 1.66 | 128 | 80.4 | 62.8 | 6.7 | 4 | 27 | 12.6 | 0.62 | 484 | 7.4 | 32.1 | 6.05 | 5.7 | |
| 955202 E-30 | 63.7 | 51.8 | 82 | 0 | 14.6 | 1.80 | 133 | 81.8 | 62.2 | 6.9 | 1 | 33 | 13.2 | 0.71 | 400 | 7.7 | 32.2 | 6.48 | 5.7 | |
| 955202 E-31 | 62.1 | 48.3 | 71 | 1 | 13.1 | 1.64 | 120 | 82.5 | 64.4 | 6.8 | 4 | 23 | 11.6 | 0.69 | 392 | 7.6 | 33.1 | 6.15 | 5.8 | |
| 955202 E-32 | 65.9 | 50.8 | 77 | 1 | 12.8 | 1.62 | 126 | 82.4 | 63.8 | 6.5 | 2 | 33 | 11.7 | 0.64 | 431 | 7.4 | 33.3 | 5.86 | 6.2 | |
| 955202 E-33 | 64.7 | 45.0 | 56 | 3 | 13.0 | 1.59 | 135 | 82.8 | 64.3 | 6.9 | 3 | 23 | 12.2 | 0.68 | 494 | 7.8 | 33.4 | 5.92 | 6.1 | |
| 955202 E-34 | 62.1 | 48.8 | 74 | 0 | 14.4 | 1.71 | 124 | 81.5 | 0.0 | 7.1 | 7 | 63 | 13.7 | 0.70 | 507 | 8.2 | 32.2 | 6.90 | 6.1 | |
| 955202 E-35 | 64.1 | 54.3 | 82 | 0 | 14.1 | 1.61 | 130 | 82.1 | 62.5 | 6.9 | 7 | 30 | 12.8 | 0.63 | 471 | 7.8 | 31.8 | 5.66 | 6.5 | |

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Table 21

| VARIETY | Davis, CA | | | | | | | | | | FARGO, ND | | | | | | | | | |
|------------|----------------------|-------------|-----------|-----------|----------|----------|-------|------------|-------|-------|-----------|----------------|----------|-------|-------|--------|--------|----------|-------|---------|
| | Advanced - Exp 95204 | | | | | | | | | | | | | | | | | | | |
| | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | NIR | EXTRACTION | | DUST | MIX | SEMOS | | FALL | SPAGH | COOKED | FIRM- | SEMOS | | RES |
| | | | | | PRO | ASH | HARD- | TOTAL | SEMOS | COLOR | PAT | SPECKS | PRO | ASH | NUM | COLOR | WEIGHT | PRO | ASH | (gm/cm) |
| | | | | | (14% mb) | (14% mb) | NESS | (%) | (%) | | | (per 10 sq in) | (14% mb) | (sec) | | (gm) | | (14% mb) | (sec) | (gm) |
| 95204 E-1 | 60.8 | 44.4 | 65 | 1 | 13.1 | 1.58 | 129 | 83.3 | 64.6 | 6.9 | 7 | 17 | 11.9 | 0.70 | 452 | 7.9 | 33.5 | 5.38 | | 6.2 |
| 95204 E-3 | 63.8 | 43.3 | 72 | 0 | 14.3 | 1.54 | 136 | 81.8 | 61.4 | 6.6 | 5 | 10 | 13.1 | 0.65 | 473 | 7.2 | 33.6 | 5.64 | | 6.1 |
| 95204 E-4 | 63.6 | 47.6 | 66 | 1 | 13.8 | 1.48 | 132 | 81.2 | 61.4 | 6.5 | 5 | 17 | 12.8 | 0.64 | 472 | 7.2 | 32.8 | 5.72 | | 6.3 |
| 95204 E-6 | 65.8 | 52.1 | 74 | 1 | 12.8 | 1.54 | 130 | 81.6 | 63.0 | 6.6 | 2 | 23 | 11.7 | 0.62 | 504 | 7.6 | 33.8 | 4.75 | | 6.9 |
| 95204 E-12 | 65.6 | 49.5 | 69 | 1 | 12.4 | 1.49 | 126 | 80.8 | 63.3 | 7.1 | 3 | 17 | 11.1 | 0.62 | 472 | 8.1 | 33.7 | 5.16 | | 6.7 |
| 95204 E-13 | 63.4 | 46.1 | 60 | 1 | 13.9 | 1.64 | 134 | 82.4 | 62.6 | 6.9 | 4 | 17 | 12.7 | 0.69 | 477 | 7.9 | 32.4 | 6.19 | | 6.3 |
| 95204 E-15 | 64.2 | 46.9 | 75 | 0 | 13.3 | 1.58 | 129 | 81.6 | 62.2 | 6.7 | 2 | 17 | 12.0 | 0.64 | 398 | 7.6 | 32.7 | 5.79 | | 6.3 |
| 95204 E-17 | 64.7 | 42.2 | 62 | 1 | 13.2 | 1.65 | 127 | 82.6 | 64.4 | 6.7 | 4 | 27 | 12.4 | 0.69 | 524 | 7.4 | 32.7 | 5.97 | | 6.8 |
| 95204 E-21 | 63.2 | 53.8 | 81 | 0 | 13.7 | 1.54 | 129 | 82.4 | 63.3 | 6.5 | 5 | 30 | 12.9 | 0.67 | 481 | 7.3 | 32.9 | 5.97 | | 6.5 |
| 95204 E-24 | 64.8 | 48.5 | 74 | 0 | 13.2 | 1.64 | 129 | 82.6 | 63.9 | 6.9 | 3 | 20 | 12.3 | 0.68 | 529 | 7.5 | 32.8 | 5.83 | | 6.4 |
| 95204 E-25 | 65.1 | 48.5 | 81 | 0 | 13.2 | 1.62 | 125 | 82.1 | 65.1 | 6.9 | 3 | 33 | 12.0 | 0.65 | 502 | 7.6 | 32.3 | 6.02 | | 6.2 |
| 95204 E-27 | 64.8 | 50.3 | 78 | 0 | 14.3 | 1.77 | 123 | 82.6 | 64.2 | 6.8 | 4 | 27 | 13.3 | 0.74 | 526 | 7.5 | 31.8 | 6.92 | | 6.0 |
| 95204 E-28 | 65.1 | 47.6 | 80 | 0 | 13.6 | 1.67 | 133 | 81.9 | 64.0 | 6.8 | 5 | 23 | 12.7 | 0.72 | 437 | 7.5 | 31.4 | 6.01 | | 6.5 |
| 95204 E-29 | 61.1 | 45.7 | 64 | 1 | 13.0 | 1.69 | 118 | 82.0 | 64.4 | 6.9 | 5 | 23 | 11.9 | 0.73 | 478 | 7.4 | 32.7 | 5.85 | | 6.3 |
| 95204 E-30 | 65.4 | 49.3 | 76 | 1 | 12.6 | 1.61 | 127 | 82.8 | 63.3 | 6.6 | 3 | 30 | 11.7 | 0.66 | 429 | 7.4 | 33.3 | 5.47 | | 6.8 |
| 95204 E-31 | 64.8 | 41.8 | 59 | 2 | 13.2 | 1.69 | 129 | 81.8 | 62.5 | 7.0 | 6 | 10 | 12.2 | 0.71 | 487 | 7.7 | 34.2 | 5.81 | | 7.0 |
| 95204 E-32 | 62.1 | 48.5 | 76 | 1 | 14.4 | 1.77 | 125 | 80.6 | 61.3 | 7.3 | 7 | 30 | 13.5 | 0.72 | 511 | 8.3 | 32.1 | 7.20 | | 5.9 |
| 95204 E-33 | 64.6 | 52.1 | 82 | 0 | 15.2 | 1.68 | 136 | 81.0 | 62.0 | 6.5 | 10 | 10 | 14.2 | 0.68 | 564 | 7.3 | 31.9 | 7.27 | | 5.6 |
| 95204 E-34 | 64.8 | 44.8 | 76 | 0 | 14.2 | 1.58 | 130 | 82.0 | 63.2 | 6.7 | 5 | 40 | 13.6 | 0.64 | 452 | 7.3 | 33.0 | 6.63 | | 6.4 |
| 95204 E-36 | 62.8 | 38.8 | 40 | 4 | 14.4 | 1.64 | 122 | 80.0 | 61.2 | 6.9 | 6 | 10 | 14.0 | 0.70 | 517 | 7.5 | 31.3 | 7.36 | | 6.0 |
| 95204 E-37 | 63.8 | 42.7 | 73 | 0 | 15.2 | 1.71 | 136 | 82.9 | 62.6 | 6.9 | 6 | 10 | 14.0 | 0.68 | 499 | 7.8 | 33.1 | 6.34 | | 6.0 |
| 95204 E-38 | 64.3 | 49.0 | 79 | 0 | 14.5 | 1.65 | 132 | 82.6 | 63.0 | 6.6 | 5 | 23 | 13.6 | 0.66 | 554 | 7.3 | 32.8 | 6.86 | | 5.7 |

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FARGO, ND

Table 22

| VARIETY | TW | | LG | SM | WHEAT | | | NIR | EXTRACTION | | DUST | MIX | SPECKS (per 10 sq in) | SEMO | | FALL | SPAGH | COOKED | FIRM- | |
|----------------|---------|------|------|-----|---------|------|-------|-----|------------|------|------|-----|--------------------------|---------|-------|------|-------|--------|---------|------|
| | (lb/bu) | KWT | (gm) | (%) | PRO | ASH | HARD- | | TOTAL | SEMO | | | | PRO | ASH | | | | NESS | RES |
| | | | | | (14%mb) | (%) | NESS | | (%) | (%) | | | | (14%mb) | (sec) | | | (gm) | (gm/cm) | (gm) |
| Mexicali 75 | 62.4 | 52.1 | 87 | 0 | 13.2 | 1.72 | 130 | | 82.2 | 64.0 | 6.8 | 5 | 40 | 12.1 | 0.69 | 393 | 7.5 | 32.3 | 6.54 | 6.2 |
| Yavaros 79 | 65.2 | 59.2 | 88 | 0 | 11.5 | 1.54 | 141 | | 84.3 | 63.1 | 6.4 | 3 | 33 | 10.4 | 0.61 | 398 | 7.3 | 33.3 | 5.11 | 6.5 |
| Westbred 881 | 61.7 | 52.1 | 81 | 0 | 13.1 | 1.72 | 124 | | 80.5 | 61.9 | 7.1 | 6 | 23 | 12.3 | 0.69 | 520 | 8.1 | 32.1 | 6.33 | 6.5 |
| Westbred Turbo | 63.8 | 63.7 | 94 | 0 | 11.8 | 1.46 | 142 | | 81.6 | 62.4 | 6.6 | 4 | 33 | 10.7 | 0.60 | 440 | 7.6 | 32.1 | 5.77 | 6.2 |
| Duren | 61.8 | 53.5 | 83 | 0 | 12.9 | 1.70 | 136 | | 79.7 | 59.7 | 6.9 | 6 | 53 | 12.0 | 0.68 | 484 | 7.9 | 31.5 | 6.81 | 6.4 |
| Duraking | 61.7 | 47.6 | 71 | 1 | 11.7 | 1.73 | 129 | | 81.7 | 62.6 | 6.9 | 5 | 30 | 11.0 | 0.68 | 436 | 7.7 | 33.8 | 5.48 | 6.1 |
| UC 907 | 62.7 | 61.0 | 92 | 0 | 14.2 | 1.83 | 137 | | 81.6 | 62.3 | 6.7 | 3 | 37 | 12.8 | 0.73 | 350 | 7.2 | 30.9 | 6.45 | 5.9 |
| UC 908 | 62.6 | 62.9 | 95 | 0 | 14.6 | 1.87 | 132 | | 79.2 | 62.1 | 6.6 | 2 | 37 | 13.6 | 0.75 | 330 | 7.1 | 31.7 | 7.62 | 5.8 |
| Aruba | 62.4 | 52.6 | 85 | 0 | 12.9 | 1.54 | 129 | | 80.6 | 60.0 | 7.0 | 5 | 10 | 11.9 | 0.62 | 399 | 7.9 | 32.6 | 6.68 | 6.0 |
| Eddie | 61.9 | 51.5 | 73 | 0 | 13.2 | 1.70 | 129 | | 80.8 | 61.6 | 6.9 | 5 | 23 | 12.5 | 0.67 | 467 | 7.9 | 32.4 | 6.73 | 6.6 |
| Cortez | 64.0 | 54.6 | 87 | 0 | 12.4 | 1.59 | 135 | | 81.8 | 62.1 | 7.0 | 4 | 23 | 11.3 | 0.65 | 447 | 8.2 | 32.7 | 6.40 | 6.0 |
| Kofa | 61.2 | 49.3 | 72 | 1 | 12.5 | 1.71 | 140 | | 80.9 | 62.0 | 7.3 | 7 | 27 | 11.7 | 0.68 | 533 | 8.5 | 30.3 | 7.03 | 6.0 |
| Kronos | 61.4 | 53.8 | 86 | 0 | 12.4 | 1.73 | 129 | | 81.0 | 60.0 | 7.2 | 6 | 23 | 11.4 | 0.68 | 445 | 8.4 | 31.0 | 5.99 | 6.7 |
| Minos | 64.4 | 51.8 | 80 | 1 | 13.1 | 1.68 | 132 | | 82.2 | 62.7 | 7.0 | 6 | 30 | 12.0 | 0.63 | 440 | 8.3 | 32.2 | 6.72 | 5.7 |
| Ocotillo | 62.0 | 52.6 | 83 | 1 | 14.0 | 1.76 | 141 | | 77.6 | 56.6 | 6.8 | 6 | 23 | 13.1 | 0.67 | 428 | 0.0 | 0.0 | 0.00 | 0.0 |
| WPB 8009 | 62.3 | 44.6 | 70 | 1 | 12.4 | 1.59 | 137 | | 86.0 | 64.4 | 7.2 | 5 | 20 | 11.8 | 0.63 | 458 | 8.4 | 33.7 | 6.55 | 6.3 |
| Ria | 63.1 | 51.3 | 82 | 1 | 12.9 | 1.78 | 135 | | 80.0 | 60.9 | 7.2 | 6 | 20 | 11.5 | 0.69 | 421 | 7.9 | 30.9 | 6.18 | 6.3 |
| WPB 8010 | 61.4 | 50.0 | 78 | 0 | 12.3 | 1.63 | 131 | | 81.6 | 61.4 | 7.6 | 7 | 30 | 11.6 | 0.68 | 475 | 8.7 | 31.8 | 6.25 | 6.4 |
| WPB 8011 | 62.8 | 55.2 | 85 | 0 | 13.0 | 1.74 | 125 | | 81.1 | 60.7 | 7.3 | 6 | 27 | 11.9 | 0.71 | 443 | 8.7 | 32.8 | 5.81 | 6.1 |
| WPB 8012 | 61.3 | 49.0 | 72 | 0 | 13.2 | 1.78 | 128 | | 80.6 | 61.9 | 7.3 | 6 | 27 | 12.3 | 0.71 | 490 | 8.4 | 32.2 | 6.05 | 6.1 |
| UC D93-202 | 64.2 | 54.3 | 86 | 0 | 13.5 | 1.65 | 139 | | 81.3 | 64.0 | 6.9 | 5 | 37 | 12.3 | 0.70 | 426 | 7.6 | 32.2 | 5.60 | 6.3 |
| UC D93-219 | 64.0 | 53.2 | 83 | 0 | 12.3 | 1.66 | 135 | | 81.3 | 63.9 | 6.3 | 4 | 30 | 11.4 | 0.72 | 438 | 7.1 | 33.0 | 5.29 | 6.5 |
| UC D93-209 | 60.6 | 58.1 | 88 | 0 | 12.0 | 1.73 | 130 | | 81.0 | 62.7 | 6.4 | 5 | 13 | 11.3 | 0.67 | 444 | 7.4 | 31.9 | 5.34 | 6.6 |

Davis, California Advanced

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FARGO, ND

Table 22 (Cont.)

| Davis, California | | | | Advanced | | | | | | | | | | | | Table 22 (Cont.) | | | |
|-------------------|---------------|-------------|-----------|-----------------|-----------------|--------------|----------------------|-------------|-----------------|---------------|------------|--------------------------|------------------|------|----------------------|------------------|--------------------------|--------------------------|-------------|
| VARIETY | TW (lb/bu) | KWT (gm) | LG (%) | WHEAT | | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO (14% mb) | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | RES (gm) |
| | | | | PRO (14% mb) | ASH (14% mb) | TOTAL (%) | | SEMO (%) | PRO (14% mb) | | | | ASH (14% mb) | | | | | | |
| UC D93-231 | 61.3 | 61.7 | 93 | 0 | 12.7 | 1.70 | 137 | 82.5 | 63.8 | 6.3 | 4 | 13 | 11.4 | 0.66 | 392 | 7.3 | 32.2 | 5.83 | 6.7 |
| Durfort | 61.9 | 49.8 | 87 | 0 | 13.0 | 1.77 | 133 | 82.2 | 63.5 | 6.8 | 5 | 20 | 11.9 | 0.71 | 425 | 7.5 | 32.2 | 6.25 | 6.2 |
| WPB 8013 | 62.1 | 51.0 | 81 | 0 | 14.0 | 1.79 | 133 | 80.3 | 59.9 | 7.1 | 6 | 30 | 13.0 | 0.69 | 423 | 8.3 | 31.8 | 6.50 | 6.1 |
| FMC 1268 | 61.8 | 50.3 | 67 | 0 | 12.8 | 1.76 | 138 | 81.7 | 62.5 | 6.9 | 6 | 37 | 12.3 | 0.72 | 445 | 8.0 | 32.8 | 5.73 | 7.0 |
| FMC 1401 | 62.4 | 52.1 | 72 | 0 | 12.8 | 1.72 | 138 | 82.1 | 62.4 | 6.8 | 5 | 17 | 12.0 | 0.71 | 412 | 7.9 | 32.9 | 6.34 | 6.7 |
| FMC 1405 | 60.8 | 43.7 | 53 | 1 | 12.6 | 1.75 | 130 | 81.1 | 59.9 | 7.4 | 6 | 40 | 11.9 | 0.69 | 478 | 8.5 | 33.0 | 6.36 | 6.5 |
| APB 8001 | 61.5 | 57.8 | 85 | 0 | 13.4 | 1.71 | 128 | 81.5 | 62.3 | 7.2 | 1 | 33 | 12.7 | 0.70 | 350 | 7.9 | 32.4 | 6.50 | 5.9 |
| APB 8002 | 61.4 | 46.5 | 71 | 0 | 11.9 | 1.79 | 113 | 81.0 | 60.2 | 6.6 | 6 | 33 | 10.6 | 0.71 | 440 | 7.5 | 32.2 | 6.07 | 7.1 |
| APB 8003 | 61.4 | 46.3 | 63 | 1 | 12.7 | 1.77 | 141 | 83.0 | 62.0 | 6.9 | 3 | 17 | 11.7 | 0.73 | 379 | 7.8 | 32.7 | 6.47 | 6.3 |
| APB 8004 | 60.3 | 44.1 | 68 | 1 | 11.8 | 1.75 | 121 | 81.5 | 61.3 | 7.4 | 3 | 20 | 11.2 | 0.72 | 466 | 8.1 | 31.1 | 7.31 | 6.1 |
| APB 8005 | 62.0 | 48.1 | 74 | 0 | 12.7 | 1.72 | 123 | 80.3 | 60.4 | 7.1 | 3 | 33 | 11.6 | 0.67 | 408 | 8.0 | 31.1 | 6.41 | 6.5 |
| UC D94-204 | 63.4 | 61.0 | 93 | 0 | 12.7 | 1.63 | 128 | 81.9 | 64.1 | 6.6 | 3 | 27 | 11.1 | 0.64 | 332 | 7.5 | 31.7 | 5.37 | 6.6 |
| UC D94-212 | 61.9 | 52.9 | 63 | 0 | 11.4 | 1.69 | 122 | 81.7 | 61.6 | 6.4 | 7 | 20 | 10.3 | 0.68 | 401 | 7.2 | 32.0 | 5.55 | 7.2 |
| UC D94-213 | 62.3 | 58.1 | 90 | 0 | 11.4 | 1.69 | 123 | 80.3 | 58.2 | 6.3 | 7 | 17 | 10.2 | 0.66 | 383 | 7.2 | 32.1 | 5.02 | 7.2 |

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Table 23

Pendleton, OR

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO |
|-----------|---------------|----------------|-----------|-----------|-----------------|---------------|------------|-------|------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT |
| OR3920036 | 63.5 | 47.4 | 82 | 0 | 10.2 | 138 | 67.0 | 6.8 | 3 |
| OR3929992 | 63.0 | 45.0 | 67 | 1 | 10.1 | 136 | 66.3 | 6.5 | 3 |
| QUILOFEN | 63.4 | 51.3 | 78 | 1 | 9.7 | 124 | 67.3 | 6.8 | 3 |
| OR4870576 | 63.5 | 55.9 | 88 | 0 | 11.5 | 139 | 66.7 | 7.0 | 5 |
| OR3880150 | 64.4 | 51.8 | 83 | 0 | 9.1 | 127 | 64.4 | 6.3 | 2 |
| OR3880152 | 63.5 | 52.1 | 84 | 1 | 8.7 | 127 | 64.8 | 6.3 | 1 |
| OR3880155 | 64.1 | 48.5 | 77 | 1 | 10.0 | 129 | 64.4 | 6.3 | 2 |
| OR3880157 | 62.6 | 51.5 | 76 | 0 | 10.5 | 138 | 65.7 | 6.7 | 1 |
| OR3880158 | 64.0 | 45.8 | 73 | 1 | 10.8 | 129 | 64.8 | 6.4 | 2 |
| OR3880015 | 62.2 | 46.1 | 67 | 1 | 10.1 | 113 | 67.3 | 6.9 | 2 |
| OR3910108 | 64.5 | 46.1 | 74 | 1 | 10.5 | 127 | 67.3 | 6.7 | 4 |
| OR3920036 | 63.8 | 48.1 | 77 | 1 | 9.7 | 126 | 65.7 | 6.7 | 3 |
| OR3920018 | 61.3 | 48.5 | 79 | 0 | 8.6 | 111 | 65.4 | 6.9 | 3 |
| OR936761 | 63.0 | 51.0 | 78 | 1 | 10.0 | 134 | 63.8 | 6.8 | 3 |
| OR936765 | 62.2 | 47.6 | 77 | 0 | 9.3 | 128 | 63.8 | 6.9 | 3 |
| OR3920049 | 63.0 | 50.5 | 74 | 0 | 10.3 | 141 | 63.8 | 6.6 | 3 |
| OR936793 | 62.9 | 52.4 | 80 | 0 | 9.7 | 125 | 65.7 | 6.8 | 2 |
| OR936794 | 62.6 | 55.6 | 85 | 1 | 9.1 | 129 | 63.5 | 6.4 | 2 |
| OR936753 | 62.8 | 64.5 | 94 | 1 | 9.0 | 142 | 64.8 | 6.3 | 3 |
| OR936754 | 62.8 | 57.8 | 88 | 1 | 8.5 | 129 | 63.5 | 6.5 | 3 |
| OR936773 | 63.0 | 42.4 | 65 | 1 | 8.2 | 97 | 64.4 | 6.4 | 3 |
| OR936775 | 63.8 | 43.7 | 75 | 0 | 9.6 | 135 | 63.8 | 6.8 | 3 |
| OR936784 | 63.0 | 54.6 | 83 | 1 | 9.8 | 128 | 63.5 | 6.9 | 3 |
| OR936786 | 63.0 | 45.5 | 78 | 0 | 8.7 | 111 | 61.5 | 7.0 | 2 |
| OR924648 | 65.0 | 51.8 | 87 | 0 | 9.0 | 129 | 63.8 | 6.6 | 1 |
| OR924696 | 63.7 | 38.8 | 54 | 3 | 8.5 | 114 | 62.5 | 6.4 | 1 |
| OR916121 | 61.3 | 48.1 | 79 | 0 | 9.3 | 117 | 65.7 | 6.7 | 1 |
| OR916123 | 61.2 | 48.1 | 78 | 1 | 10.3 | 116 | 64.4 | 6.6 | 2 |
| OR936723 | 63.4 | 54.3 | 89 | 0 | 11.2 | 146 | 63.2 | 6.8 | 3 |

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Table 23 (Cont.)

Pendleton, OR

Fargo, ND

| VARIETY | TW (lb/bu) | KWT (grams) | LG (%) | SM (%) | WHEAT | NIR | SEMO | SEMO | MIXO |
|----------|---------------|----------------|-----------|-----------|-----------------|---------------|------------|-------|------|
| | | | | | PRO (14% mb) | HARD- NESS | EXT (%) | COLOR | PAT |
| OR936725 | 61.8 | 46.3 | 69 | 1 | 11.5 | 133 | 62.9 | 7.0 | 3 |
| OR936735 | 63.0 | 54.3 | 82 | 1 | 11.8 | 137 | 66.3 | 6.8 | 4 |
| OR936729 | 64.5 | 54.3 | 91 | 1 | 10.3 | 126 | 65.4 | 6.7 | 2 |
| OR936746 | 64.5 | 55.2 | 91 | 1 | 9.1 | 125 | 63.8 | 6.7 | 2 |
| OR936731 | 63.8 | 51.8 | 74 | 1 | 10.1 | 134 | 64.8 | 6.6 | 3 |
| OR936738 | 61.9 | 47.4 | 87 | 2 | 9.7 | 120 | 66.0 | 6.7 | 2 |
| OR936741 | 62.0 | 49.5 | 70 | 1 | 10.0 | 137 | 66.3 | 6.6 | 3 |

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FARGO, ND

Table 24

| Tucson AZ | | Special | | | | | | | | | | | | | | | | | |
|-----------|---------------|-------------|-----------|-----------|-----------------|-----------------|----------------------|--------------|-------------|---------------|------------|--------------------------|-----------------|-----------------|----------------------|----------------|--------------------------|--------------------------|-------------|
| VARIETY | TW (lb/bu) | KWT (gm) | LG (%) | SM (%) | WHEAT | | NIR HARD- NESS | EXTRACTION | | DUST COLOR | MIX PAT | SPECKS (per 10 sq in) | SEMO | | FALL NUM (sec) | SPAGH COLOR | COOKED WEIGHT (gm) | FIRM- NESS (gm/cm) | RES (gm) |
| | | | | | PRO (14% mb) | ASH (14% mb) | | TOTAL (%) | SEMO (%) | | | | PRO (14% mb) | ASH (14% mb) | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| N-10 | 65.7 | 52.6 | 90 | 1 | 9.3 | 1.51 | 128 | 80.9 | 62.5 | 6.8 | 3 | 27 | 8.5 | 0.66 | 418 | 7.6 | 31.3 | 4.22 | 9.4 |
| N-11 | 65.8 | 53.5 | 88 | 1 | 10.2 | 1.52 | 133 | 81.3 | 63.2 | 6.8 | 3 | 17 | 9.2 | 0.65 | 439 | 0.0 | 29.9 | 3.86 | 9.6 |
| N-12 | 65.9 | 56.2 | 92 | 0 | 11.2 | 1.51 | 142 | 81.8 | 63.9 | 6.9 | 3 | 17 | 9.7 | 0.63 | 464 | 7.9 | 31.0 | 3.86 | 8.5 |
| N-13 | 65.6 | 50.8 | 88 | 0 | 9.8 | 1.52 | 126 | 82.3 | 62.2 | 7.2 | 3 | 23 | 8.7 | 0.67 | 465 | 8.7 | 32.6 | 3.83 | 8.4 |
| N-14 | 65.9 | 50.5 | 90 | 0 | 10.6 | 1.56 | 131 | 80.3 | 63.7 | 7.2 | 4 | 37 | 9.6 | 0.66 | 461 | 8.8 | 31.5 | 4.48 | 8.7 |
| N-15 | 65.7 | 50.8 | 92 | 0 | 12.8 | 1.57 | 140 | 80.1 | 61.2 | 7.2 | 6 | 23 | 11.0 | 0.64 | 469 | 8.8 | 31.9 | 4.98 | 8.9 |
| N-16 | 64.5 | 56.8 | 92 | 1 | 8.8 | 1.44 | 110 | 79.1 | 59.7 | 6.9 | 3 | 13 | 7.9 | 0.62 | 489 | 8.3 | 33.0 | 4.00 | 9.8 |
| N-17 | 64.8 | 58.8 | 92 | 1 | 9.9 | 1.47 | 125 | 81.5 | 62.8 | 6.9 | 3 | 20 | 8.7 | 0.60 | 628 | 8.0 | 33.2 | 3.78 | 9.4 |
| N-18 | 64.9 | 61.7 | 92 | 1 | 10.6 | 1.48 | 130 | 81.3 | 62.9 | 6.8 | 2 | 23 | 9.2 | 0.58 | 475 | 8.1 | 31.3 | 4.32 | 8.0 |

